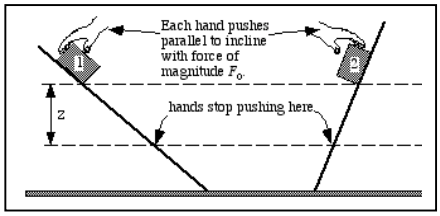
Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



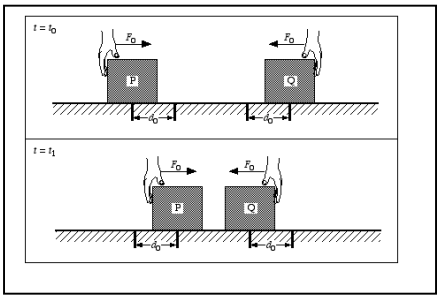
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Since the hand is constanly accelerating the block down the incline, we have the work-kinetic energy theorem, the final velocity of block one is greater than its initial velocity, so the work done is positive*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Since the hand is constanly accelerating the block down the incline, we have the work-kinetic energy theorem, the final velocity of block one is greater than its initial velocity, so the work done is positive*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *Since the incline is steeper for block 2, it would travel the same distance in less time giving it a greater velocity and hence more work would be done*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *Since the block is applying the same force on the hand that the hand applies to the block, and the hand covers the same distance as the block, the work done on it would be positive*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.

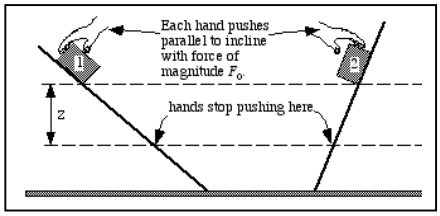


Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Block P has a positive distance with a positive force. Block Q has a negative distance witha a negative force which would make it positive.*

Define system R to consist of Blocks P and Q.
Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *The net work for the system is equal to the work done by block one plus the work done by block 2, both have the same force applied and cover the same distance.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



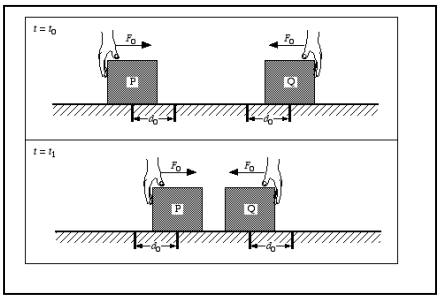
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *the work done on the hand is positive because you can define the positive direction in any way that you choose.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *If the work done on block one is positive then the work done on block two must be negative*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *the incline is less steep*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *the is no work done on the hand by the block*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

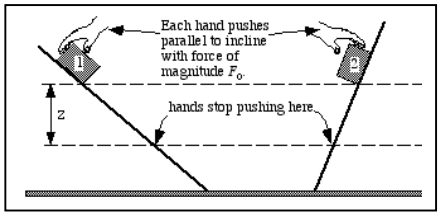
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *the work must eb in opposite directions*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *work is equal to the force times the distance*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



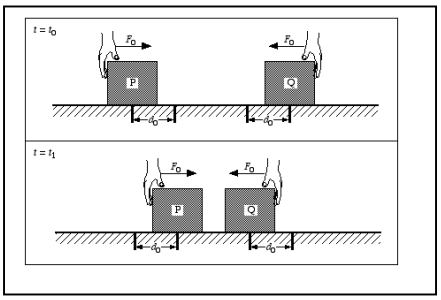
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *Because it's pushing in the negative y direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *because it is being pushed steeply in the negative y direction.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *the slope is steeper in case 2, requiring more force for case 1*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *because its pushing back in the negative x-direction*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

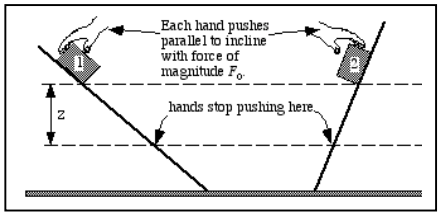
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *They are both being pushed the same positive force*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *they have the same weight, and the same force being applied in opposite directions so the net force is 0.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



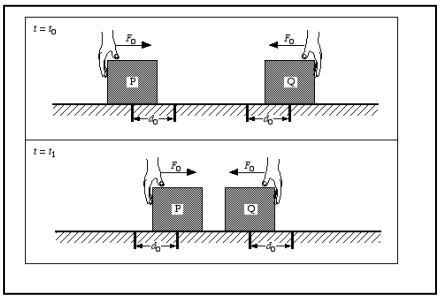
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The system is the block and work was exerted on it. Since we care only about the block the work is positive.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *I used the same reasoning to deduce this as in question 4, but work done on a sytem is positive.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *This is because both hands exert an equal amount of force but hand 1 is in contact with block 1 for a longer period of time. Relating this back to the integral of force exerted over a shorter time, the hand that pushes longer exerts more work.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *If the block is the system then work it exerts on the hand is negative by convention.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.

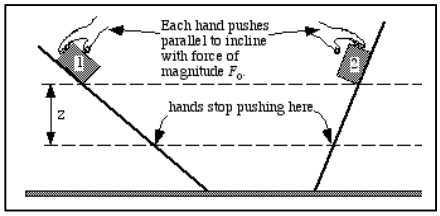


Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *As work is defined as the integral of force over distance, displacement is utilized opposed to absolute locations. This means work must be positive for both cases.*

Define system R to consist of Blocks P and Q.
Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *Since the components must sum to the whole, twice the work exerted on one block should equal the work exerted over the entire system.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



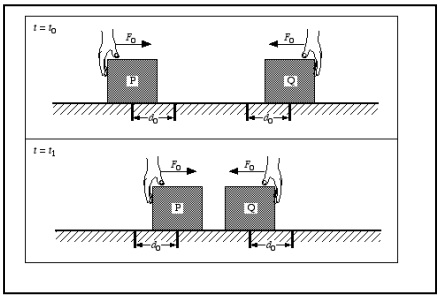
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *its on a more flat incline*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *it is on a more steep incline*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain.

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain.

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is negative.

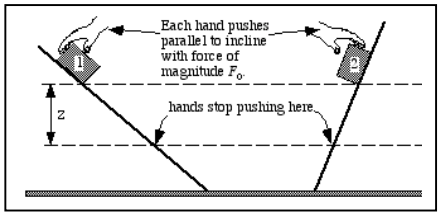
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above.

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
4 Fo do
Explain.

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



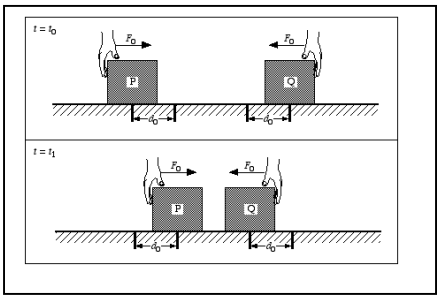
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *It really depends which direction you pick to make the positive direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Same as above*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Thanks to the angle of the slop the wor done by the hand on block one would be greater*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *equal and opposite*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

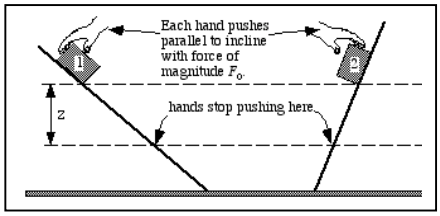
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Using the standard reference frame of class to the right is positive meaning left is negative*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *equal and opposite*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



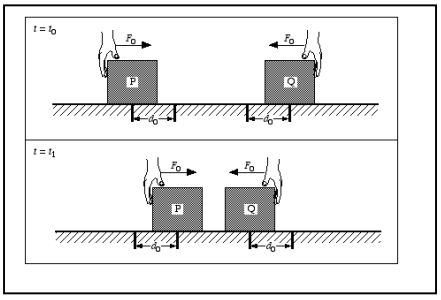
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *because work is force times distance, both of which are positive in this case*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *because work=force times distance and while the force is positive it moves in a negative direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *BOth boxes experience the same force and travel the same distance (z)*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *the force the block exerts on the hand is negative while the hand moves in a positive direction thus work is negative*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

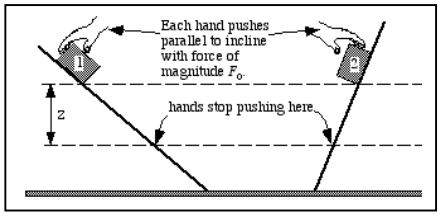
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Q goes in the opposite direction of P thus it's distance is nagative much like its work*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *The work done on Q is just the negative amount of the work done on P thus they even each other out and net work = zero.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



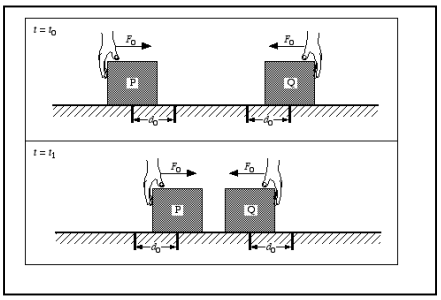
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *I'm not sure about this answer.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *See above.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Hand 1 exerts the same force over a longer time, therefore the work done on block 1 is greater.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *I'm not sure about this answer.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

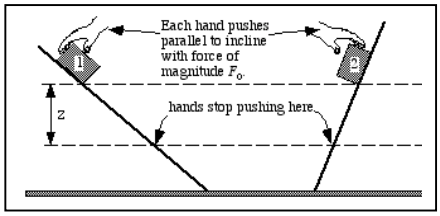
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Again, I'm not sure about this answer.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *The total work done is the sum of the work done on the 2 blocks.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



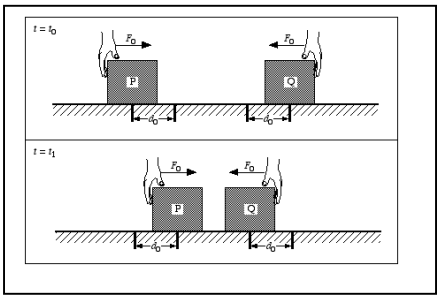
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Our choice of coordinate system doesn't matter in this case because work done can never be negative, even if it is in a negative direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Our choice of coordinate system doesn't matter in this case because work done can never be negative, even if it is in a negative direction.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *The force exerted is the same and it is exerted over the same interval of vertical distance so in the end the work done is equal.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *Again, work can't be negative.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

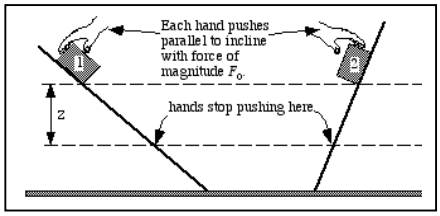
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Work does not have a negative value, no matter what direction it is in.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *Since work can't be zero then the amount of work done in this case it twice that done to one block.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



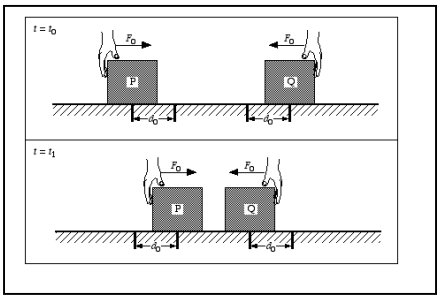
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Not sure how to answer this.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Same as a above.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *The overall distance that the force is applied to block 1 is greater. Since the force is equal, the work done on block 1 is greater.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *Opposite the work done on the block by the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

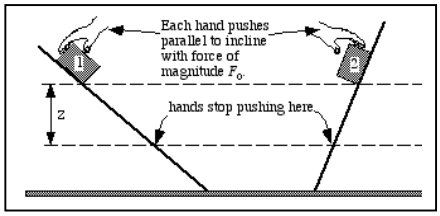
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Again, I'm not sure.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *It is the sum of the work done on both blocks.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



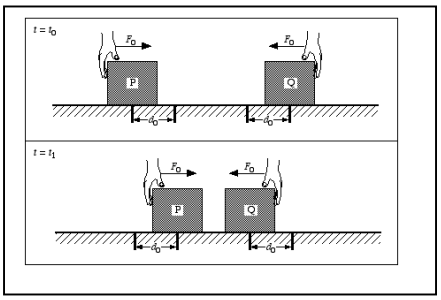
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *dun kna*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *dun kna*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *dun kna*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *dun hav 1*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is negative.

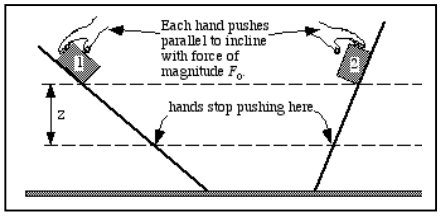
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *dun kna*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
Fo do
Explain. *dun kna*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



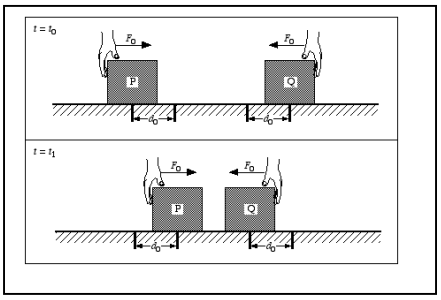
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *The work is negative because it is the downward direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *The work done is negative because it is in the downward direction.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *Because they travel through the same veritcal distance.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *Opposite the work done by the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

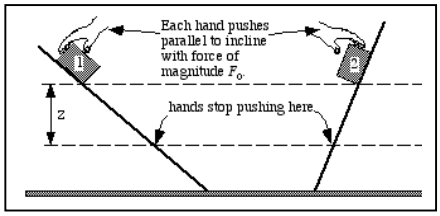
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *One is to the right and one is to the left.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *The work is doubled.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



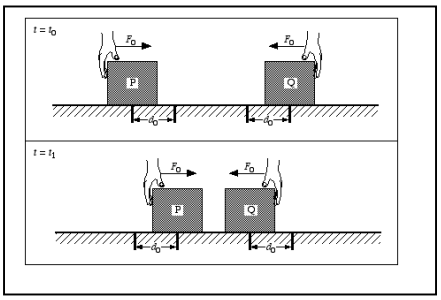
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Moving the block downwards against friction is always positive.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *The same reason as above.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *For hand 1 there is less gravity to help move the block so the work must be greater.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *To move the block the work must be positive.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

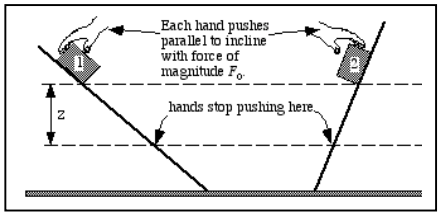
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *The total work for the system negates itself so one must be positive and the other negative.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *See 14.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



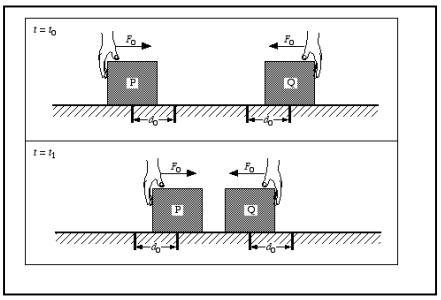
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *It is down the ramp.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *Down the ramp.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *They are pushing equal distance down the ramp.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *Opposite the direction of block 1 pushing on the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

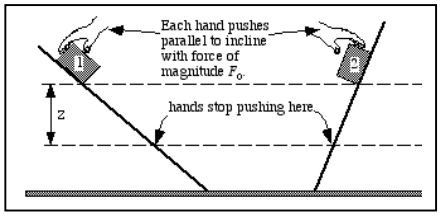
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Equal distances (but opposite) and equal forces.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *They are exactly equal and opposite so they cancel out.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



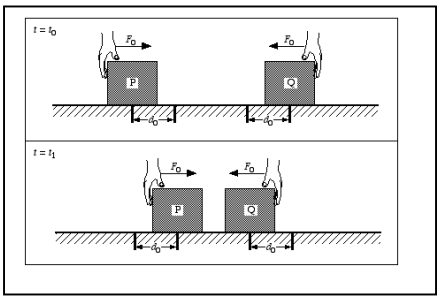
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Postitive x direction*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *negitive x direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *greater distance for block one*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *negitive x direction*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

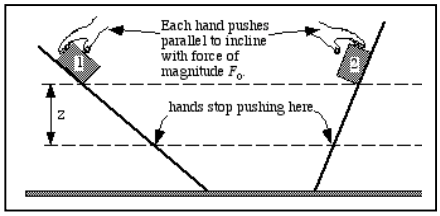
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *one is in the positive x direction and on is in the negitive*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *cancel out*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



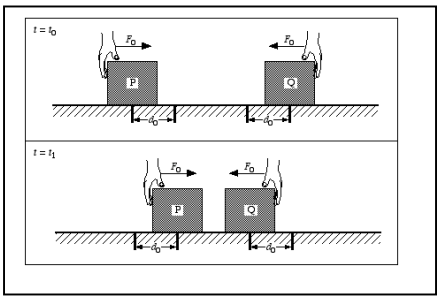
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
unanswered
Explain. *conservation of energy*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *conservation of momentum*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *conservation of momentum*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *cant have negative work*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

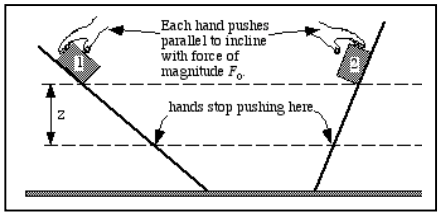
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *both positive in opposite directions*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
Fo do
Explain. *formula*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



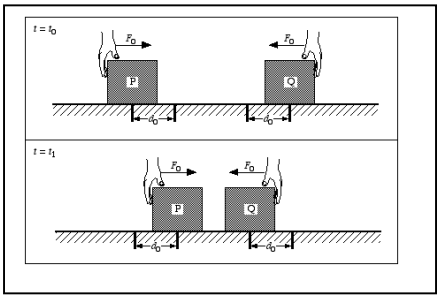
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Work is being done in the same direction as the motion of the block.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Work is being done in the same direction as the motion of the block.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Both blocks have the same amount of force acting on them but block 1 travels a greater distance while that force is being applied.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *Work done on the hand by the block is in the opposite direction of the motion of the system.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

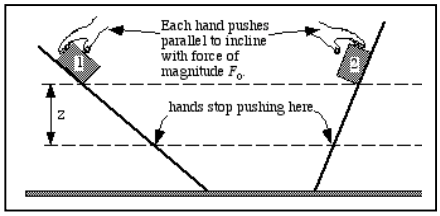
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Work done on the blocks in both scenarios is in the same direction as the motion of the blocks.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *There is the same force applied over the same distance in opposite directions but the objects ended up in a different position then they were initially so work was done.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



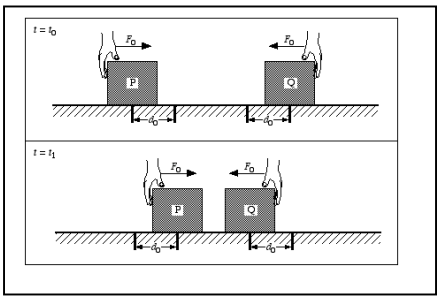
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *force is positive.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *force is positive*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *equal because the forces are equal.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *equal and opposite*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

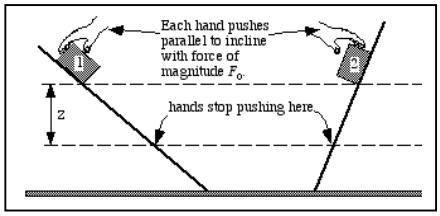
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *opposite directions.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
4 Fo do
Explain. *add the two.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



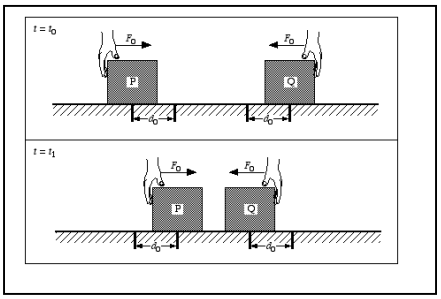
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *its negative because it is pushing down*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *it is negative because the hand is pushing downward*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *the slope is lesser so the work is less for hand 1*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *the block is pushing up on the hand so if the hand is pushing down and the work is positive then the block pushing on the hand was positive*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

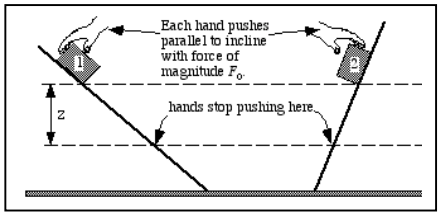
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *the hand is pushing on both the blocks so it is positive work done*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *there is an equal and opposite push on both the blocks*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



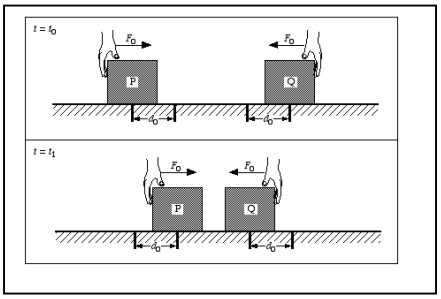
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *Because it is in the neg direction*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *It is in the positive direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *block two is up a steeper slope*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *Same direction, neg*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

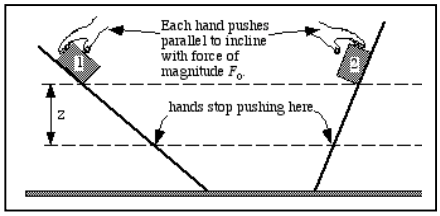
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *set of direction. one is positive one is negative*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
other (please specify below)
Explain. *its the addition of the two forces together.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



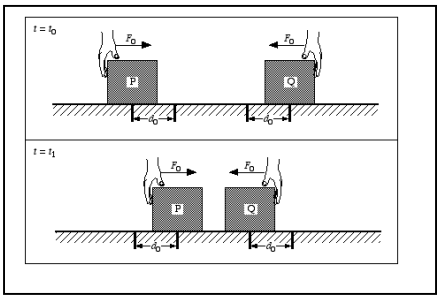
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *Because the hand is pushing in the negative direction and down the slope*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *The block is being pushed down and in the negative direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *Block 2 is being pushed down a steeper slope so it is more in the down direction*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *It is pushing the hand up*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

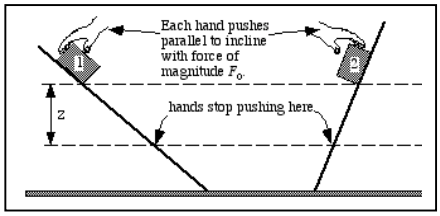
Explain for both questions above.

the blocks are being pushed in the positive and negative directins acording to the x axis

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *the blocks are beng pushed the same amount and cncel each other out*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



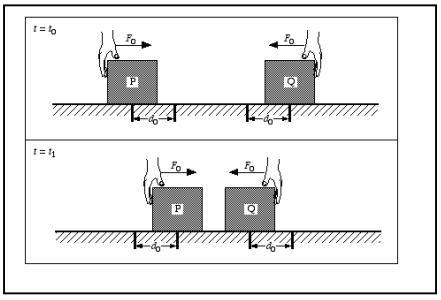
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *the hand is pushing in the direction of the motion so it's a positive work.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Same explanation as for the previous question.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *The expression of the work includes the cosine of the angle between the direction of the force and the direction of motion ; in both case, the angle is the same : zero. So, they are equal.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *the force is opposite to the direction of motion of the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

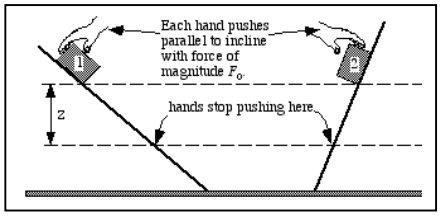
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Both forces done by the hands are in the direction of their respective blocks' motions.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *If we consider the system R, we get two works equal in magnitudes but in opposite direction so their sum is zero.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



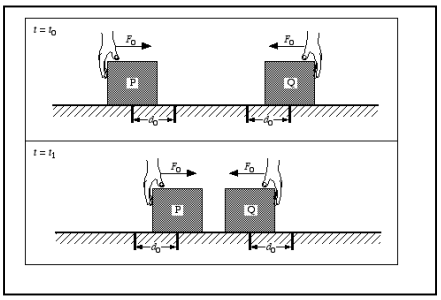
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *positive x direction*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *negative x direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *incline is less*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *positive y direction*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

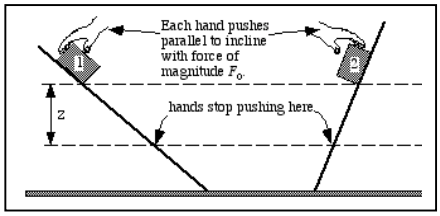
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *positive x direction is to the right*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
Fo do
Explain. *sum of forces*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



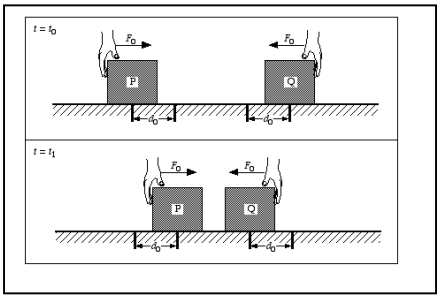
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *The hands are pushing in a negative direction so the work is negative.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *Same reason as 5.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Block one travels a greater distance and the forces for block 1 and 2 are the same. So the work done on 1 is greater than the work done on 2.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *The block is not moving the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

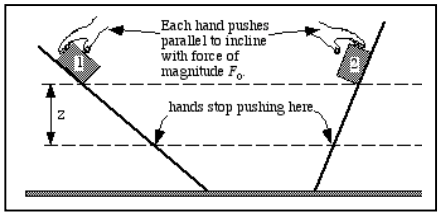
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Block p is moving in a positive direction and block q is moving in a negative direction.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *The same force and same distance traveled for each block will equal zero because block Q moves in a negative direction.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



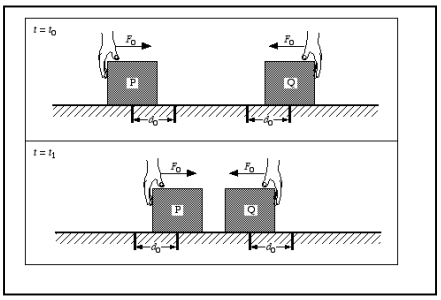
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *There is no such reason for negative work.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *It is doing the same amount of distance as the other one.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Because the work done travels a greater distance*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *The normal force is a positive number.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

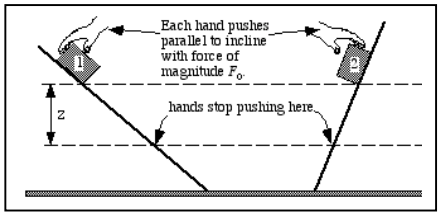
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above.

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
unanswered
Explain. *There is no such thing as negative work.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



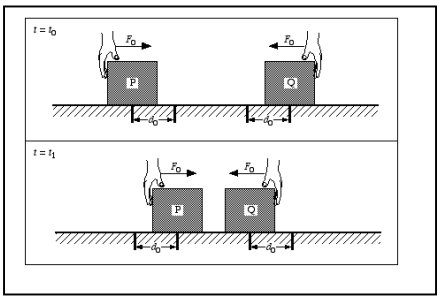
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *acceleration is in a negative direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *acceleration is in a negative direction.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *they both push with force F but block 1 goes a further distance.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *it is in a positive direction.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

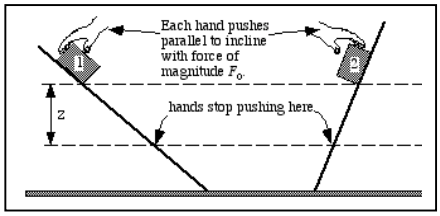
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *the direction of acceleration is neg for P and positive for Q*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *the 2 works are equal magnitude, but opposite signs so they cancel*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



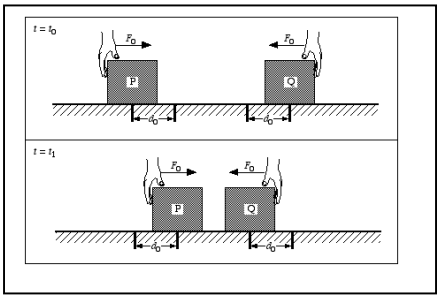
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
unanswered
Explain.

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain.

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain.

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain.

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is negative.

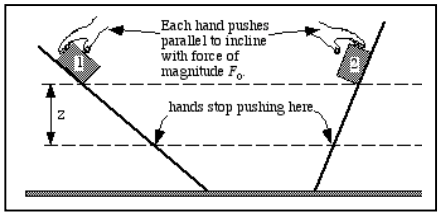
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above.

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
Fo do
Explain.

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *it takes work to move it up, not down*

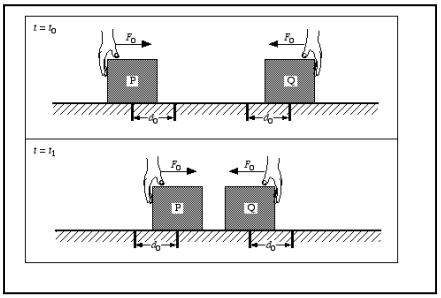
Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *same reasoning*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *they are at the same height*

work = force x distance

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *doesn't do any work on the hand*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

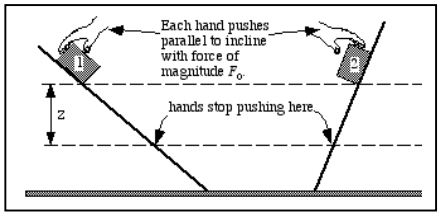
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *assuming work is a vector, not a scalar, then this is true*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
Fo do
Explain. *guess*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



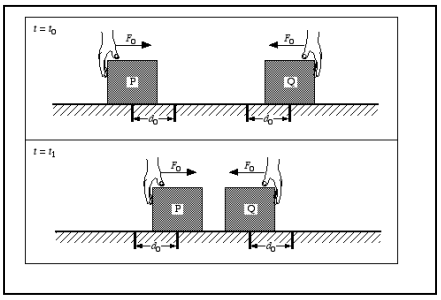
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is zero.
Explain. *The block is pushed in the direction of gravity so no force is needed to move it.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *Same as in the situation above except the block will move faster on a steeper slope.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *Both are zero.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *The block pushes against the hand in the direction opposite of the net force.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

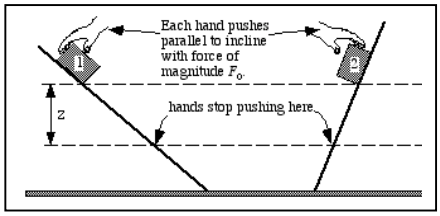
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *The work done on each block is the same, only one is positive and the other negative depending on the direction of the force applied.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *Both are in opposite directions so they cancel out, and the abs. value of 0 is 0.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



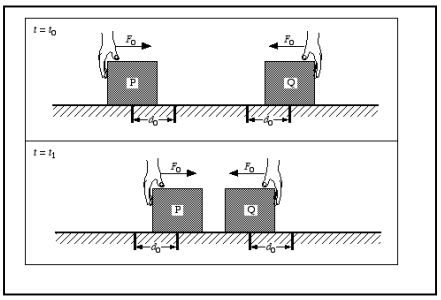
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *the is a positive net force*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *same as above*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *shalower slope*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *it just is*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

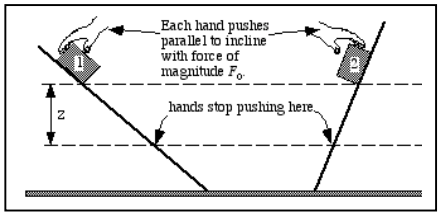
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *opposite directions*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *equal and opposite directions*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



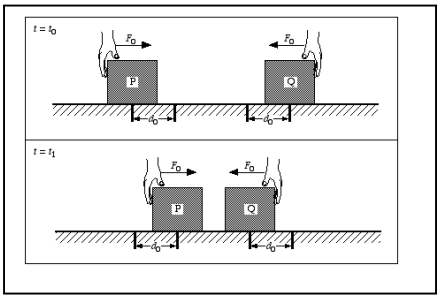
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Because I said so*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Because my head hurts*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Because of the incline*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *That's the way my coordinate system is.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

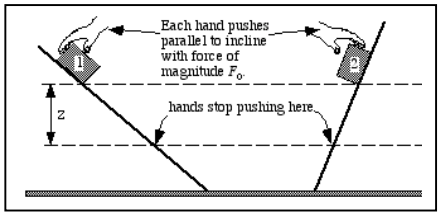
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Coordinate system*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *Canceled out. Identical. Bed time.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



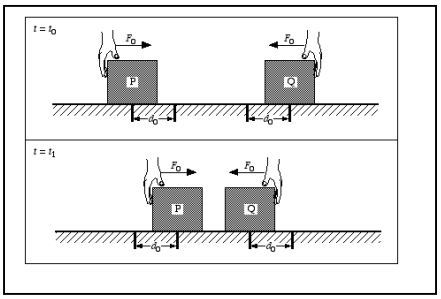
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *the hand force follows the motion of the object, thus the hand force is positive.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *the hand force follows the motion of the ojbect, thus this hand force is positive.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *the slope for the object 2 is steeper than the slope for for the object 1.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *opposite Direction of the object's motion*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

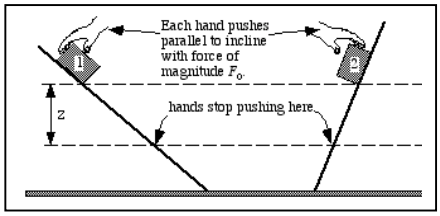
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *the forces have the same direction as the displacement*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *those forces are equal and opposite thus net work is equal zero.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



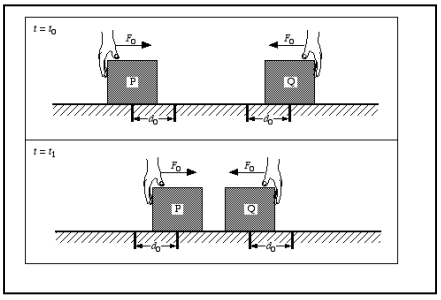
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The work done is positive because the hand is pushing down on the block, causing it to move down the ramp.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *It would just be the same as the first scenario, but it the work would have a lower value than block 1 because of the incline of the ramp.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *They would be the same because both work for both blocks are positive.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *It is negative because the overcoming force is the hand and not the block on the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

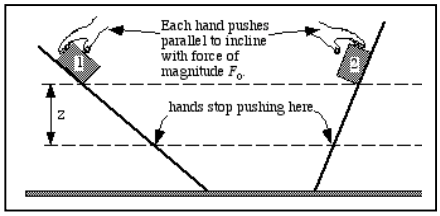
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Since the hand is pushing the blocks, the work is not negative. The hands are the overcoming force.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *Since there are two hands working in this system, the answer would be 2 Fo do.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



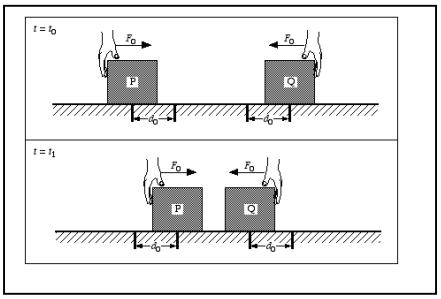
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *the work by hand is going the opposite direction of gravity, so the work done by the hand is negative.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *same as the previous question*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *since the hand is pushing the block down, and since there is a steeper slope to ramp 2, then there is less force needed to push the block down - gravitational force.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *forces are equal and opposite for force pairs, and since the force on the block by hand is negative then the force on hand by block must be positive.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is zero.

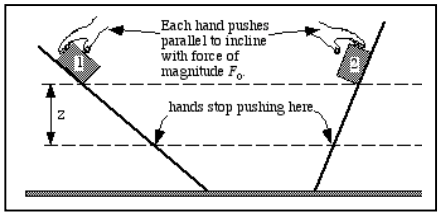
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is zero.

Explain for both questions above. *there is no acceleration in either direction the block is being pushed and since the equation is F=ma and if acceleration is zero, so will the work on the block.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *the system is balanced in both directions counteracting one another because the mass of the blocks are the same being pushed with the same force and thereby moving at the same speed.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



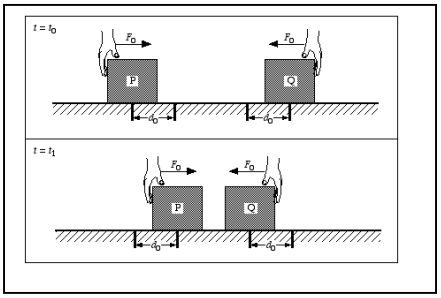
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Work = Force X distance*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *same as before*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Because distance is greater in block 1 then 2 so if force is constant for both. Then Work is portional to distance.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *Covers no distance*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

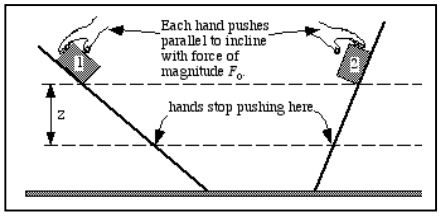
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Same as before*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *Because even though work is being done on both P and Q they cancel each other out.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



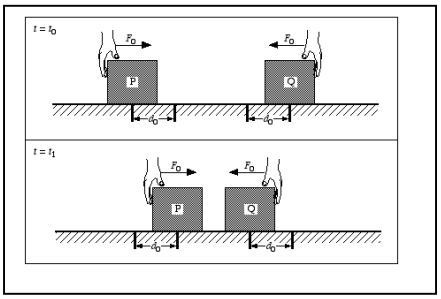
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *It is positive because the block is moving to the right in a positive direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *The hand is pushing the block to the left, which is negative, therefore the work done is negative.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *The work done by hand 1 and 2 are equal because the ramps are the same length, the blocks are the same mass, and they are pushing the same distance.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *Because the hand is doing positive work on the block, the block therefore is doing negative work upon the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.

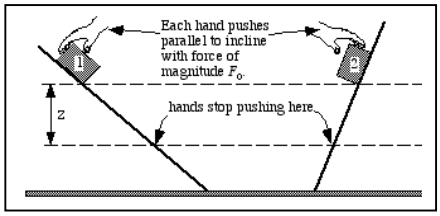


Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Because they are moving in opposite directions the work done on each block is going to be equal and opposite. One is negative and one is positive.*

Define system R to consist of Blocks P and Q.
Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *Because there are two blocks and the force is equal you would just multiply the work done by 2 in order to come up with the net work for the system.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



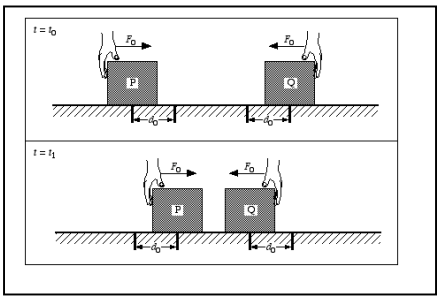
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *it is from the left side*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *from the right side which s positive*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *same hand so same force*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *oppisite to the hand work on the block*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is negative.

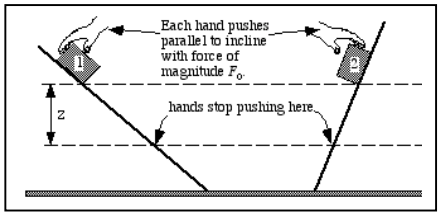
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *it is obvious that both are to the left*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *sum all the work*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



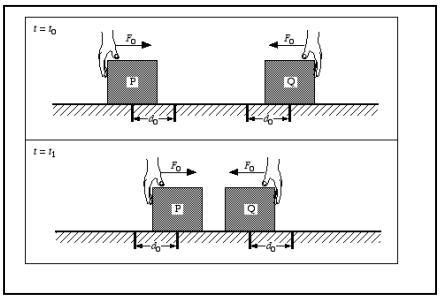
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *There is a positive amount of force being exerted on the block so work must be positive.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Again, there is a positive amount of force being exerted on the block so work must also be positive.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *More gravity is acting on block 2, which then requires less work to be done by the hand.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *The force of the block on the hand is negative since it is acting in the opposite direction of motion.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

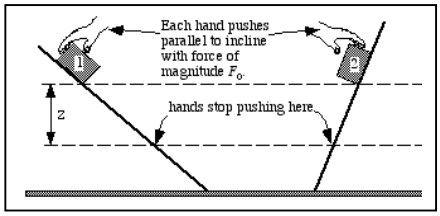
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *The work done on both blocks is positive in respect to each block because the force being exerted on each is in the direction of motion.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *There are 2 positive forces being exerted on the system as a whole. They may be in opposite directions but they are positive to each block individually.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



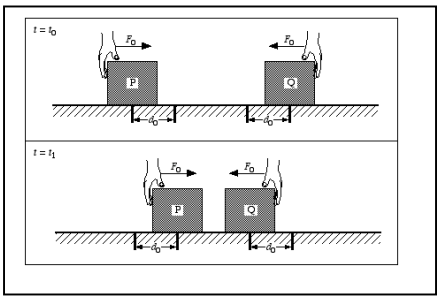
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *because it is work*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *dito*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *smaller incline*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *biggger incline*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

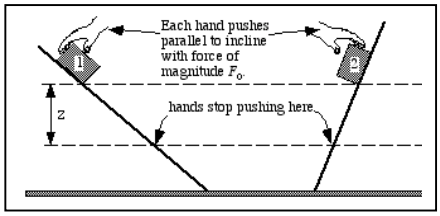
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *distance has no boundries*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *distance is all relative*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



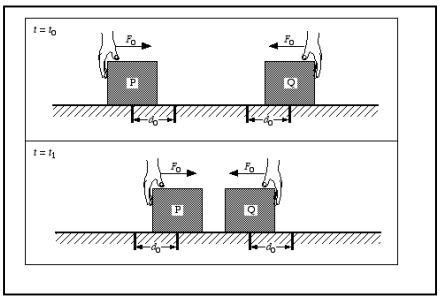
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *It points to the positive direction*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *Because the force points in the negative direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *Because we have the same situation but different directions*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *Points in the positive direction*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is negative.

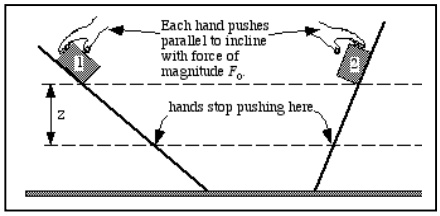
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *The direction of the force in to the negative direction*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *the sum of the two works*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



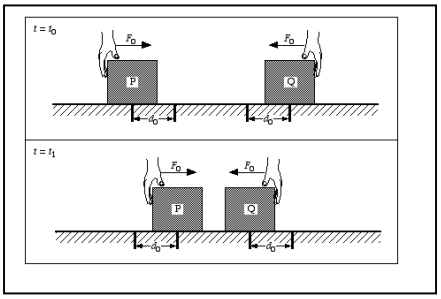
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain.

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain.

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain.

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain.

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

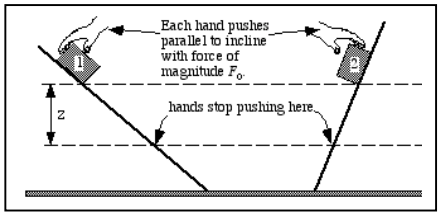
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is zero.

Explain for both questions above.

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain.

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



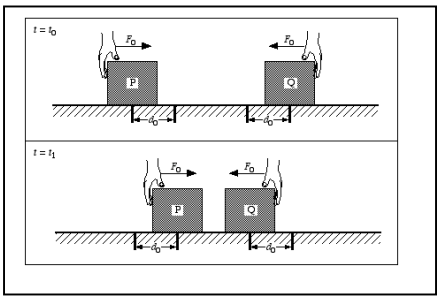
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Work is always positive*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *as above*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *block 1 moves further*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *work is always positive*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

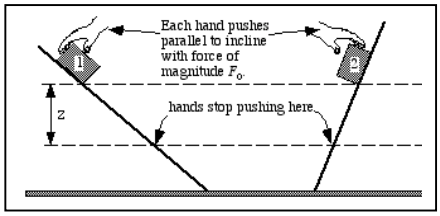
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *work is always positive*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *the system was compressed*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



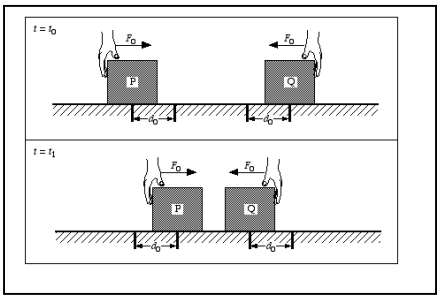
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *the hand is forcing the block downwards, so it is also assisted by gravity, so it does not require as much work as letting it go or pulling it up.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *same as above*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *there is less of an incline, therefore harder to push overall.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *the block just wants to drop down, so it doesn not exert much of a force on the hand at all*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

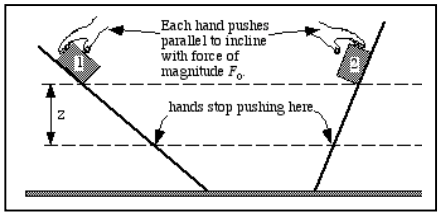
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *one is in the positive direction, one is in the negative direction*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *they are equal and opposite forces so they cancel out.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



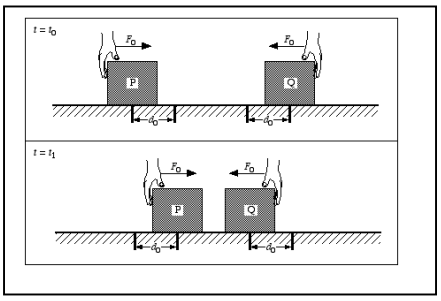
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *work is equal to force times distance*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *work is equal to force times distance*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *same force, more distance*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *work is equal to force times distance*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

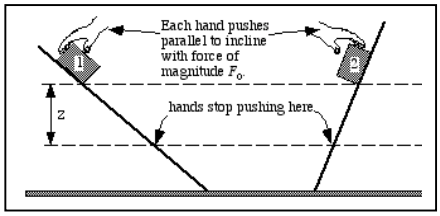
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *work is equal to force times distance*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *equal amount to left and right*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



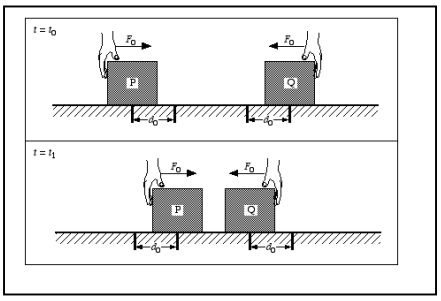
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *beacaue work is being done ON the box*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *beacaue work is being done ON the box*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *the ramp is less steep*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *the work is beign done on the block*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

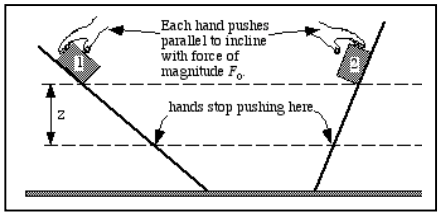
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *the work is being done ON the blocks*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *because both are postive so you add the works*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



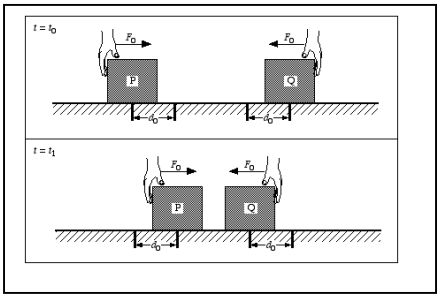
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *becaouse the hand is pushing on it in the dirction ov motin*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *force times distance , the hand is pushing in the direction of motion*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *the force is the same but the distace is greater on 1*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *it is negative becouse it is going down*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

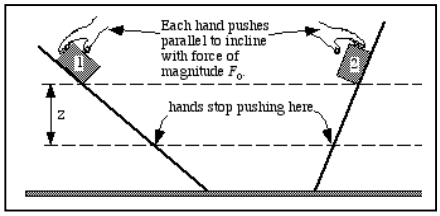
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *it is foce times distance and the sighn distance difines if the work is pos of neg*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *they are same magnitude and opposite direction*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



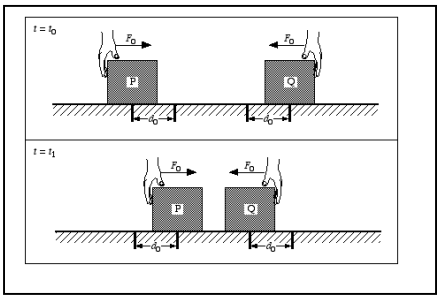
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *the force is being exerted to the positive direction. parellel to the direction that the block is moving.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *The block is moving in the negative direction along with the slope.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *the blocks are both pushed with the same force*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *as a result to the work done by the hand; the block moves in the positive direction.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

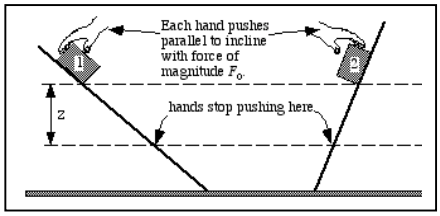
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *work is always positive*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *absolute work is the sum of the system.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



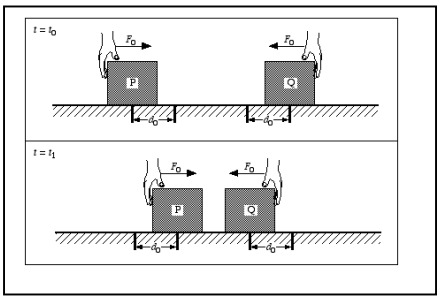
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *The block is losing height.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *This block is also losing height.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *Thwy both lose the same amount of height.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *The block doesn't push the hand anywhere.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is negative.

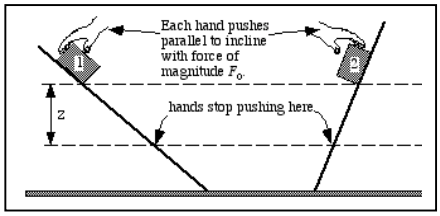
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *If positive is to right and negative is to the left*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *The equal and opposite forces cancel each other out.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



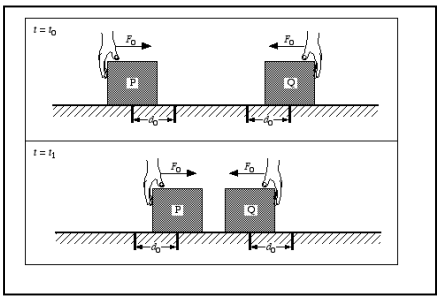
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The work done by the hand is in the positive x direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *The work done by the hand is in the negative x direction.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *The blocks are covering the same vertical distance.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *The block is pushing back in the positive y direction.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

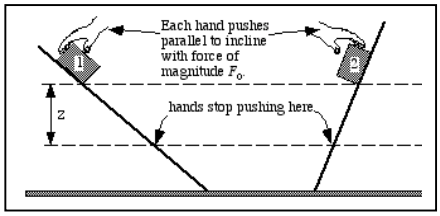
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *I used the positive and negative direction on the x axis.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *two time the work done on one block.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



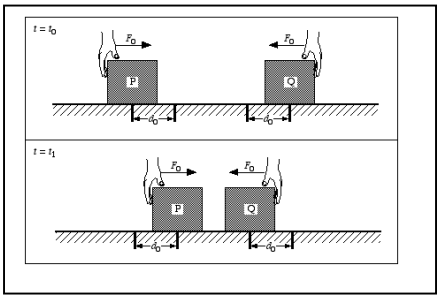
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *because the hand*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *negative*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *by the hand*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *nevative*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

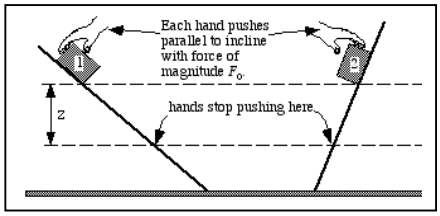
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *moving over*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *2 fo do*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



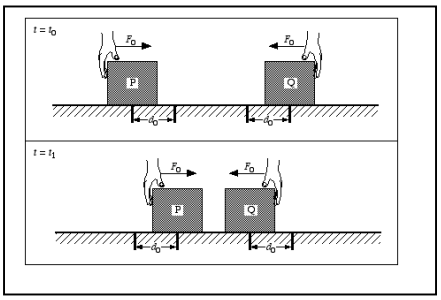
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Helping it overcome force of friction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Same reason. The block is moving and the force is positive.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *More force times the same displacement.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *Opposite direction.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

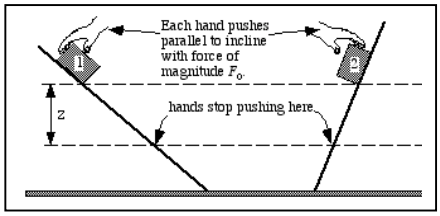
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *I suppose the second is negative because it's in the other direction.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *No net forces, and I'm guessing no net displacement.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



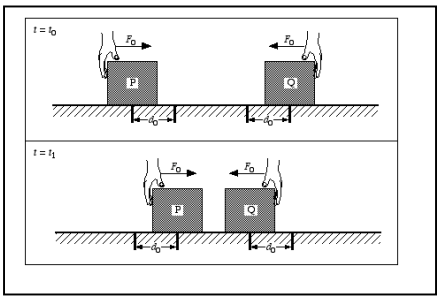
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *idont know*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *i dont know*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *i dont know*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *i dont know*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

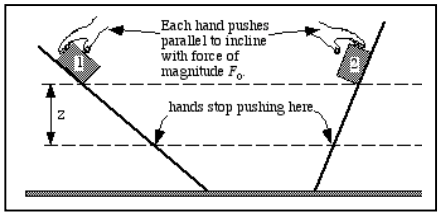
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *i Dont know*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *I dont know*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



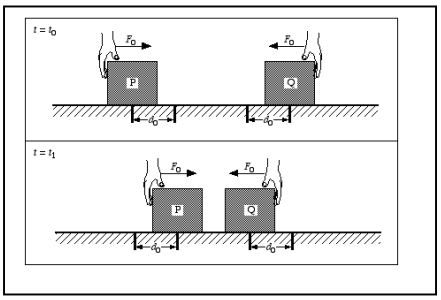
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *it is pushing it down the ramp.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *it is pushing it down the ramp*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *they are both pushing blocks of = mass down ramps covering = height differences.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *it is pushing back against the hand in the opposite direction.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is zero.

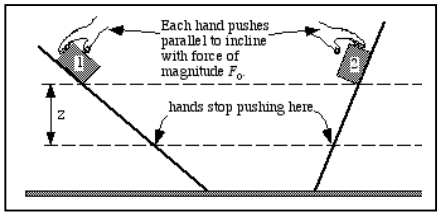
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is zero.

Explain for both questions above. *work is up and down motions*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *no blocks are moved up or down.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



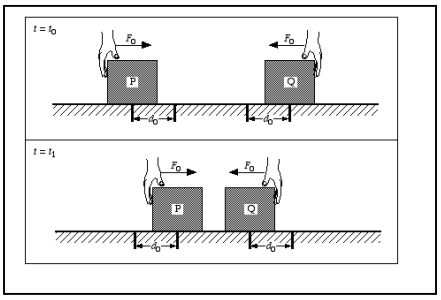
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Negative work does not exist.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Negative work does not exist.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *$W = F * D$ with the same constant force, a greater distance traveled results in a higher ammount of work done.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *The work done by the normal force from the block is a positive ammount.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

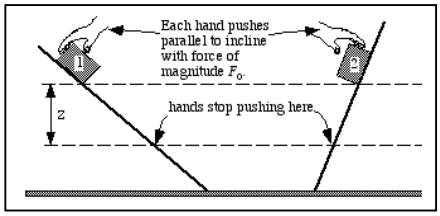
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Negative work does not exist.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *The two works are both positive.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



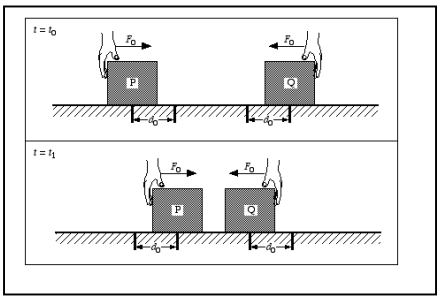
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *because there is no negative work*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *same as above*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *because more force is needed on block 2*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *cause the block does nothing*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

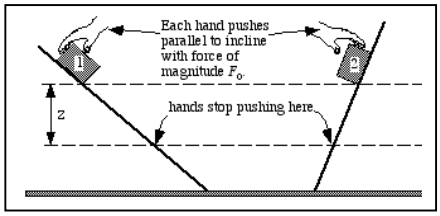
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *thr moving so thr positive*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *because thr are 2 blocks*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



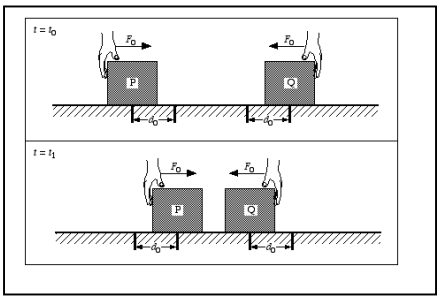
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *the hand does work on the system*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *the hand does work on the system*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *gravity accounts for less work in the first block*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *the system doing work on the surroundings is negative*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

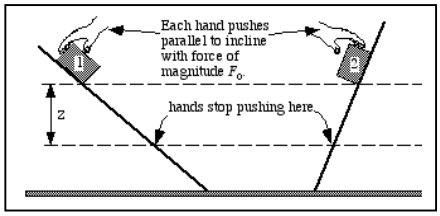
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *surroundings doing work on system is positive*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. $w = fd \ |d|1 = |d|2$

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



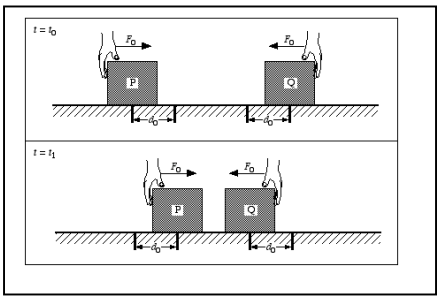
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *because the vector is more negative.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *vector is positive direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *vector is smaller*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *opposite of negative*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is zero.

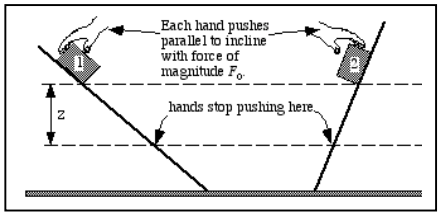
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is zero.

Explain for both questions above. *moved same*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *no other forces*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



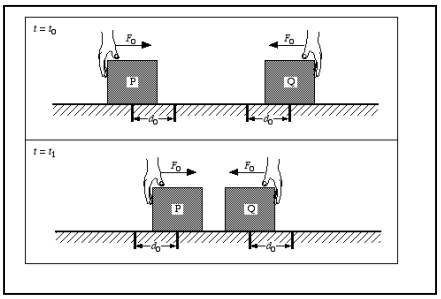
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The hand was pushing so it had a force and it was in the direction of motion so it must be positive*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Same as question 5*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *the force exerted on both was said to be equal*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *IT IS IN THE OPPOSITE DIRECTION of motion so it is negative*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

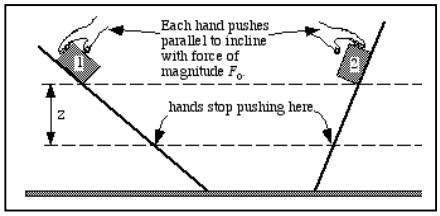
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *One is positive and one is negative it doesn't matter which is which*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *abs value would mean the neg to pos and add the two together and you get 2F0do*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



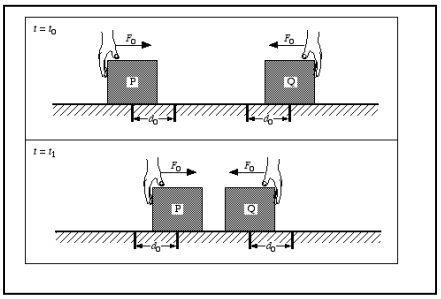
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *because the block is moving to the right therefore the work done on the block by the hand must be positive*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *because the block is moving to the left therefore the work done on the block by the hand must be negative*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *because the hand on block 1 will have to do more work do to the shallower incline than the hand on block 2*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *because the work done on the hand by the block is up and to the right which is in a positive direction*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.

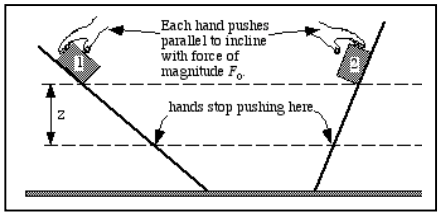


Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *block p is moving to the right and in a positive direction while block q is moving to the left and in a negative direction*

Define system R to consist of Blocks P and Q.
Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *because the work done on the system by block p is cancelled out by the work on the system done by block q and therefore the net work on the system would be zero*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



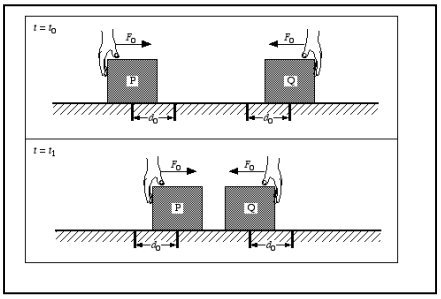
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Work is positive because energy is put into the system*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Work is positive because energy is put into the system*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain.

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
unanswered
Explain.

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

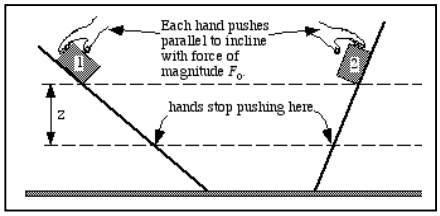
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Work= Force times change in displacement*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain.

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



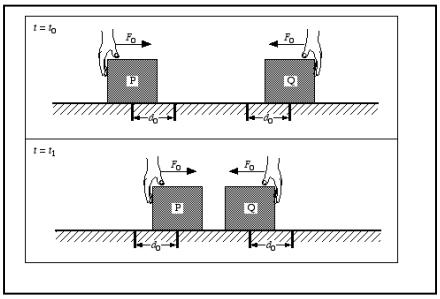
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *It pushes it*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *It also pushes the block*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *2 has a steeper slope*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *It doesnt push*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

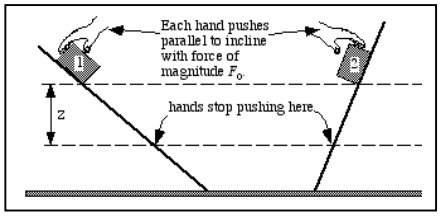
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *They are moving in two opposite directions*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *Positive and negative over equal distances = 0*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



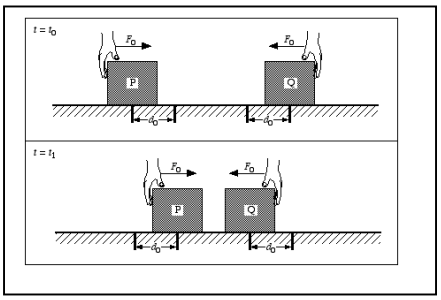
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *because it is going the negative direction*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *because it is going st negative direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *it will need more force to push down 2 because it it is more steep*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *facing upward*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

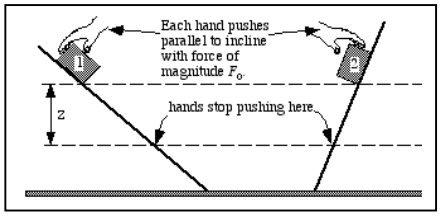
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *p is gong to the right and qis going to the left*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *p is positive and g is negative…they are about the same length*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



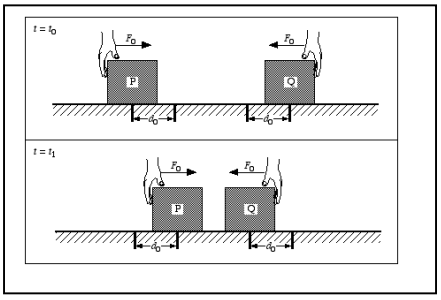
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *maybe, because tha block goes down. I don't know really. Just guessing*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *I figured it has to be the same sort of work as block one*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *Doesn't work have to do with vertical displacement? Thay have the same amount of that. Of course, I may be wrong. I am sort of guessing*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *Total guess. I completely dont understand the question*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

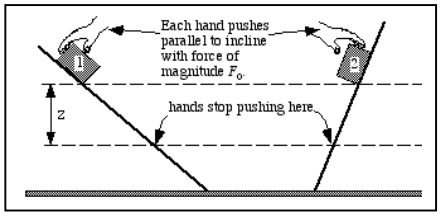
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *The same sort of thing happens either way. a block is moved a certain disstance. i figure that work is probably positive for that reason.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *two blocks, same amount ofmovement. There must be some work to bring them close together. can't be zero.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



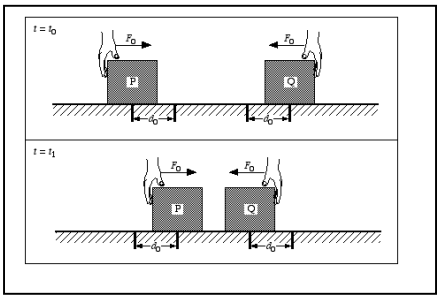
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Since the force of the hand is parallel to the incline and the block is being pushed some distance, the hand is doing positive work on the block.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Block 2 also moves some distance by means of a force that is parallel to the angle of the surface it's moving on, so the hand does positive work.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Both blocks move the same distance, but the angle of the force on block 2 is greater, so the hand doesn't have to perform as much work.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *The block does not move or displace the hand in any way. It is the hand that is moving the block.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.

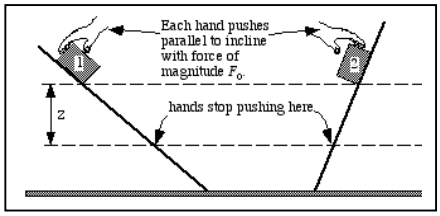


Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *The work done on both blocks is positive because the movement of each block is in the same direction as the force.*

Define system R to consist of Blocks P and Q.
Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *Since the blocks are identical, the forces exerted are identical, and the displacement of each block is identical, one can say that the work done by moving one block is doubled for moving two blocks.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



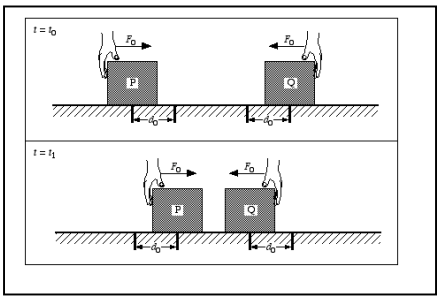
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *pushing towards the right*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *becasue it is pushing in the opposite direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *because gravity is doing less work in case one*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *it is pushing back on it*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

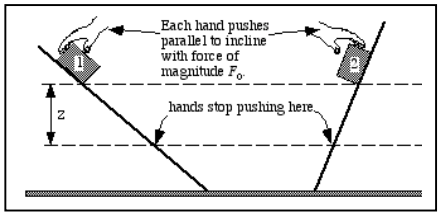
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *make axies with the right positive*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *being pushed opposite so cancel out*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



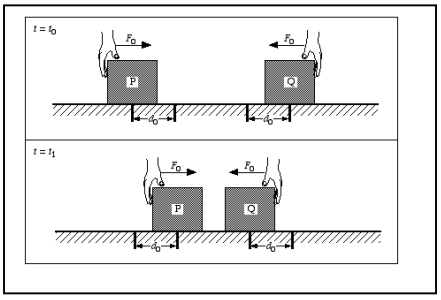
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The work done on Block 1 is positive, because it is pushing it down the ramp to the right which i take to be the positive direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *For the same reason, i take pushing to the left to be negative.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *The hand on block 1 has to do more work since it has more distance to push and less gravity helping it out.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *Same reason, it is to the left which i take as negative.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is zero.

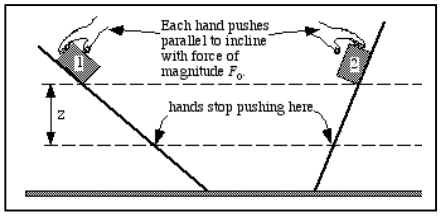
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is zero.

Explain for both questions above. *They are not moving up or down, just from right to left so the work done on them is zero.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *The net work is zero still since both of the blocks also have zero work on them.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



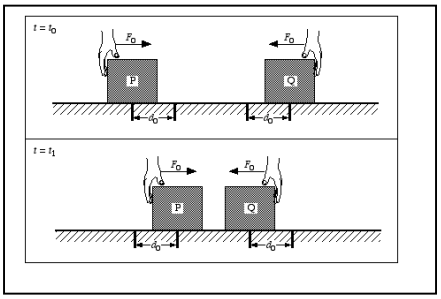
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The block is being pushed down the ramp in the positive x direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *As the other block, work is done in the positive x direction.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *block 2 is in a more steep ramp, therefore it is less than.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
unanswered
Explain.

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

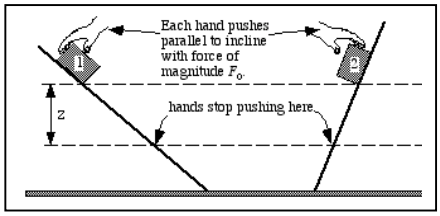
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above.

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
Fo do
Explain.

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



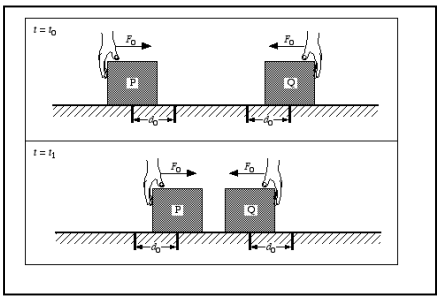
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *the direction of acceleration is positive*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *the direction of acceleration is zero*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *the force needed to push the block down is much less*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *the force the hand exerts on the block is exerted back on the hand by the block*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

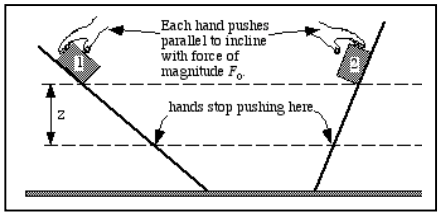
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *work is done on the system versus the system doign work on something*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *wok is done on both blocks to make the work twice the load of one block*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



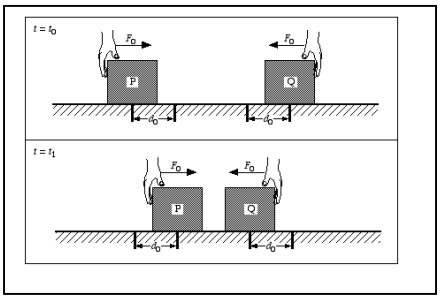
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The hand is pushing the block down the ramp to right (pos), work is force times displacement*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *hand is pushing block in a negative direction (down the ramp) and negative on x - axis*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *same force on each block, but block 1 has a greater displacement*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *It is going to be opposite work done by hand on block due to 3rd law pairs*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

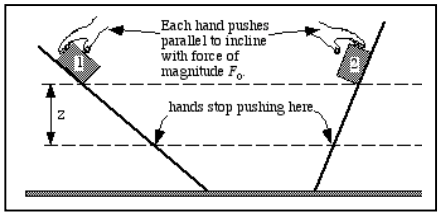
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *P moving in positive direction, Q in negative direction*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *same work and displacement from each, one neg. one pos. so 0*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



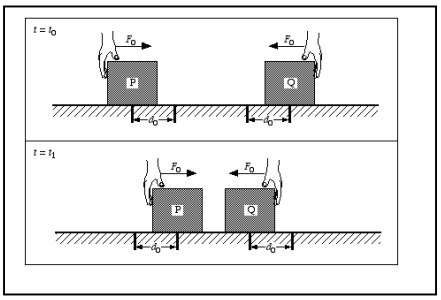
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *force, distance are positive but cos(theta) is negative*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *cos(theta) is positive*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *there is less of an angle, thus less work is needed*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *opposite to what the hand is doing to the block*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

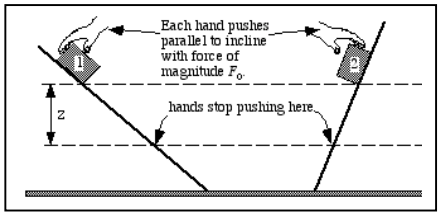
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *cos(0) is positive and cos(pi) is negative*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *Fo Do cos(0) times Fo Do cos(0) which is the same as 2 Fo Do*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



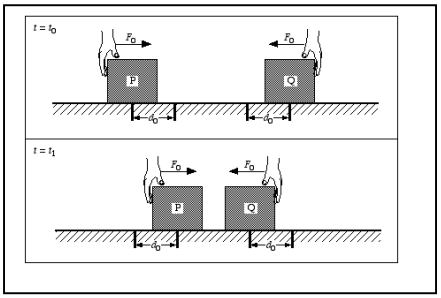
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Work is the transfer of energy to and from a system. The system of the hand and block 1 has a positive value because the force of the hand cause the block to move.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *same reason as question 5*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *More force is required to get the block down the incline for block 1 as opposed to the steeper incline for blick 2*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *This work will be a result of the normal force of the block on the hand. And since the force of the hand on the block is positive, the normal force must be negative.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.

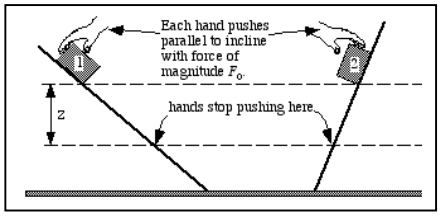


Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Chose a force direction to be positive, making the other direction negative. Thus the work becomes positive or negative.*

Define system R to consist of Blocks P and Q.
Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *equal and opposite work is done on the same system*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



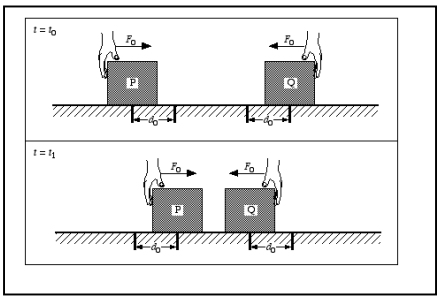
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is zero.
Explain. *The block falls.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is zero.
Explain. *The block falls.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Arbitrarily, this is correct.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *Arbitrarily, this is correct.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

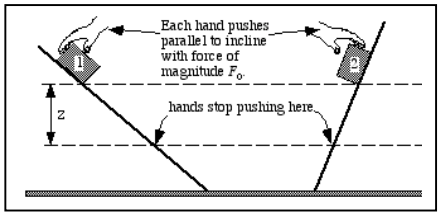
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *You have to do positive work to get something to move.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *The blocks move together to rest.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



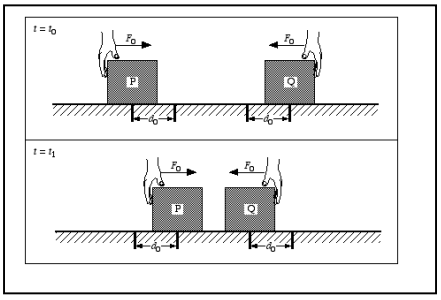
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *The block has a greater potential energy at the higher position than the lower position*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *The potential energy of the block at the higher position is greater than the potential energy at the lower position*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *the work is equal because the change in height (and therefore potential energy) is equal*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *the block does not exert a net force on the hand*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

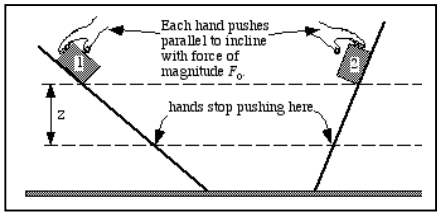
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *the hands exert a force in the same direction as the motion of the block, increasing the kinetic energy of the blocks*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *the kinetic energy of each block is increased, and each block is moved the same distance by the same force*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



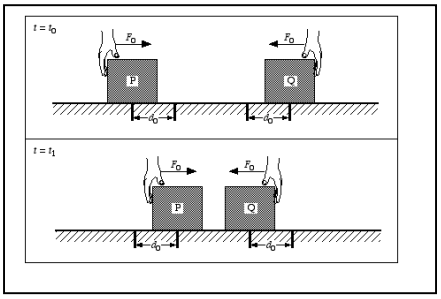
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain.

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *hkgc gfx*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *KUCIYTC*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *THRDURD*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

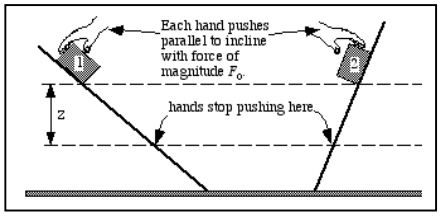
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *luhvy*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
4 Fo do
Explain. *hn ;*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



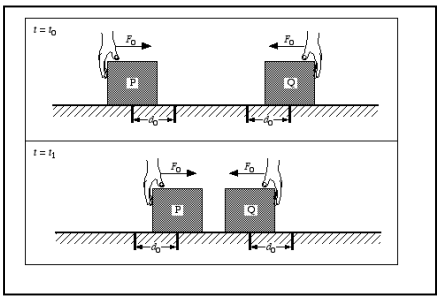
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *in the same direction as the motion*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *same*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *the force it over the same distance*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *in this case it is negative because I have designated up as the negative direction*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

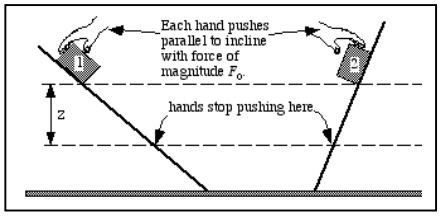
Explain for both questions above. *right positive*

left negative

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
4 Fo do
Explain. *adding both forces*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



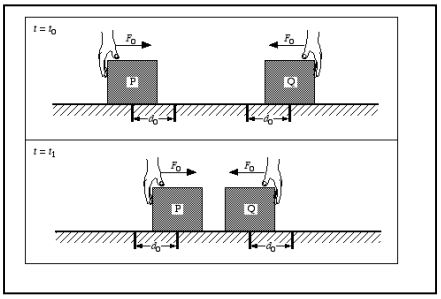
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The hand is pushing block 1 in the positive direction, so work is positive.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *The force is in the negative direction so the work is in the negative direction.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *$W = F * d$. Since the forces and the distances are both equal, the magnitudes of the work are equal.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *Newton's third law. Force on block is positive, so force on the hand by the block must be equal and positive, therefore negative.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.

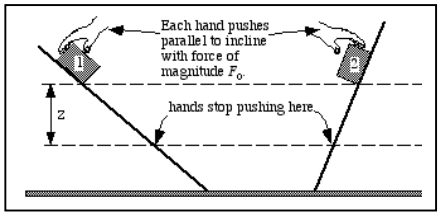


Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Work is dependent on force and distance. If the direction of the force is positive, then work is positive. If the direction of the force is negative, then work is negative.*

Define system R to consist of Blocks P and Q.
Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *Work for P is equal to the opposite of work for Q. The values cancel out, so work for the entire system is equal to zero.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



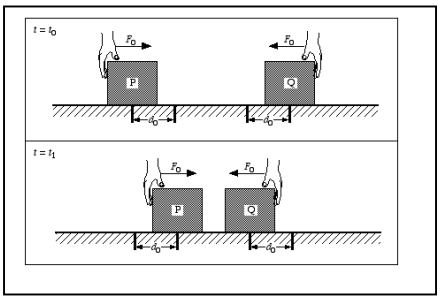
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *You gotta get it done son!*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Ohhhh yeah!*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *I don't know!*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *Maybe.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

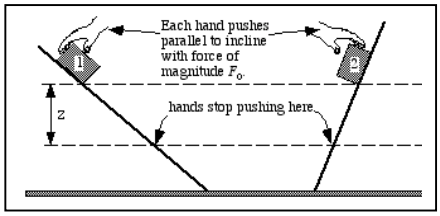
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *Work sucks.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
4 Fo do
Explain. *Ridin' in my fo' do'!*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



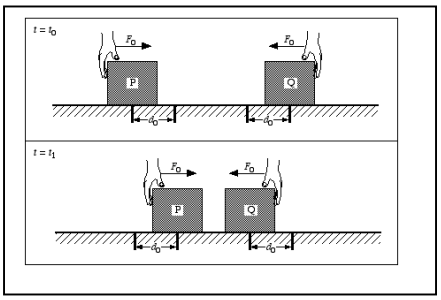
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *i think its neg because the block is going down overall*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *still neg*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *less slope therefore less work*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *block is pushing against the hand more upwards*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

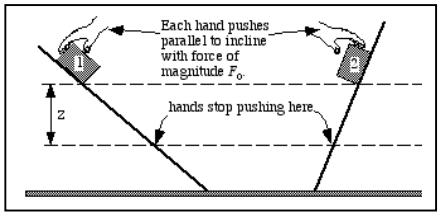
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *using the basic coordinates system where pos x is towards the right*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *the net work on the sys is zero because each of the blocks cancel out each other*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



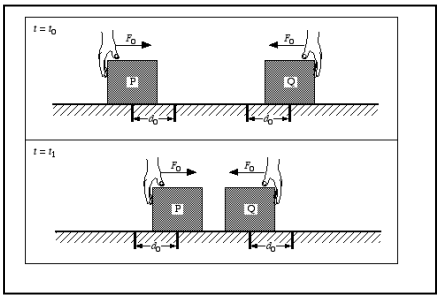
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *because its being pushed*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *same as the answer above*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *less incline so less help by gravity*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *i dont know*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

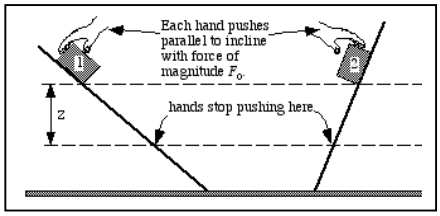
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *they are being pushed*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *still dont know*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



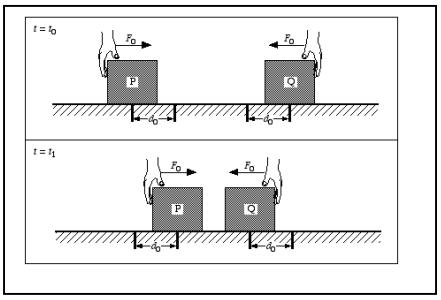
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *because it is moving in the negative direction. Down the ramp*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *because the block is being pushed down the ramp in the negative direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *They are both pushed with the same amount of force.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *because it is pushing in the positive direction, up, against the hand*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

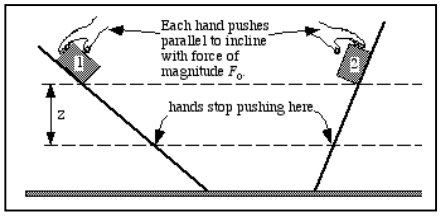
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *because while P is being pushed in the positive x-direction, Q is being pushed in the negative x-direction.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *they are both being pushed with the same amount of force*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



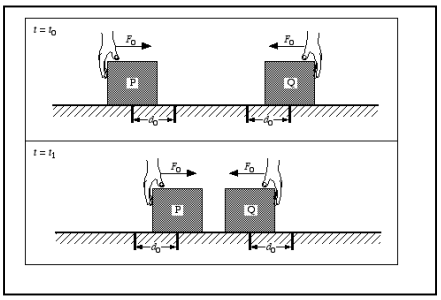
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Work can't be negative.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Can't be negative.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *Block 2 has a steeper incline.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *They're equal.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

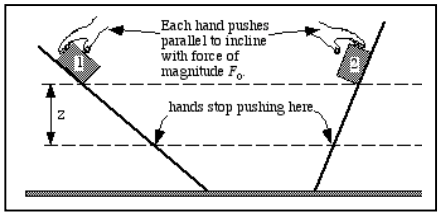
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *They're not 0, and they can't be negative.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
4 Fo do
Explain. *The math worked out in such a way.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



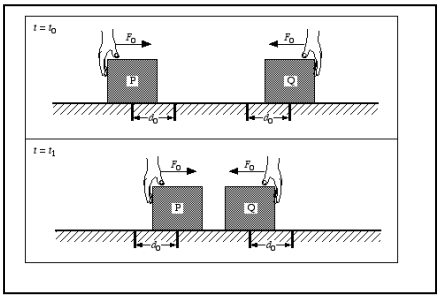
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *I really don't know much about the sign of the value of work. I'll assume it's positive because it's being pushed.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Again I don't know abou the sign of the value of work. I'll assume it's positive because it's being pushed.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *The slope of the ramp block 2 is moving down is much steeper and thus requires less work to move the same vertical distance.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *I'll say it's negative because it's in the opposite direction of the work done on the block by the hand, although again I don't know anything in detail about work.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

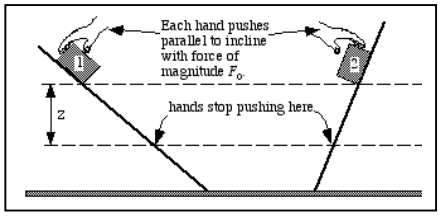
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *I'll guess the work done on each have opposite signs because they are being worked on in different directions.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *Work done in one direction is cancelled out by work done in the other (guess).*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



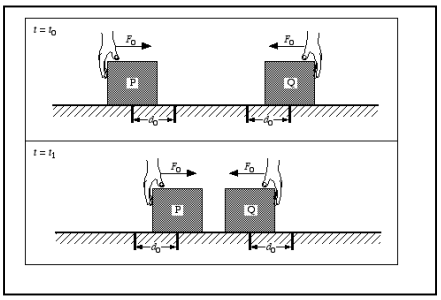
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *Negative because it is moving in a downward direction.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *Negative because it is moving in a downward direction.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *Block 2 is moving in a more vertical plane, therefore, more work.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *The block is not moving the hand anywhere.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is zero.

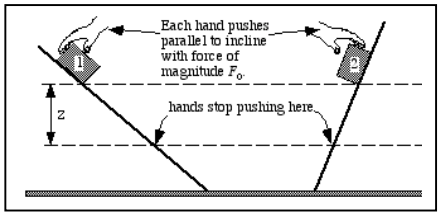
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is zero.

Explain for both questions above. *The work depends on verticle movement, not horizontal.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *The work depends on verticle movement, not horizontal.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



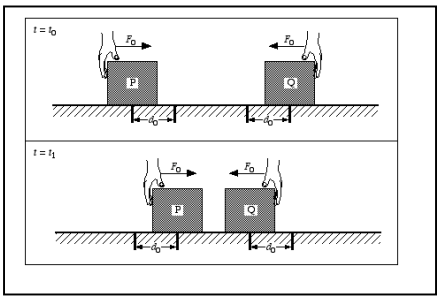
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *It puts a force on the block, causing it to use energy.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *It still puts a force on the block.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *The incline is steeper on #2, therefor needing less energy.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *It absorbs the energy from the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

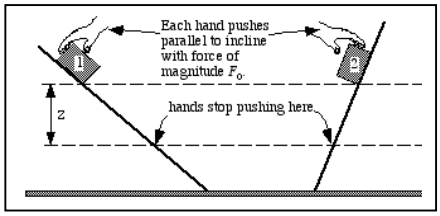
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *It exerts a force on the block, using energy.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *It has 0 work for the first object and 0 work for the second object.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



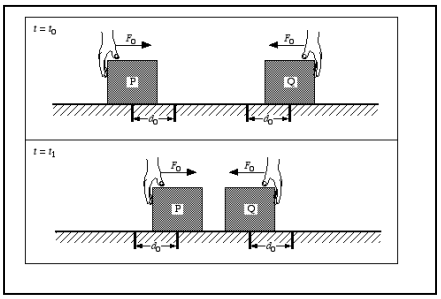
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Work is a vector quantity and force is in the positive direction so work is too*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *The force is to the left and down so it is negative and so is work*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *it travels a greater distance*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *the force is in the positive direction*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

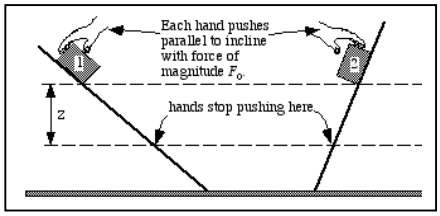
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *p is moving to the right so the force is to the right and q is moving to the left so the force is to the left*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *there is the same amount of work in different directions so the net work done must be zero*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



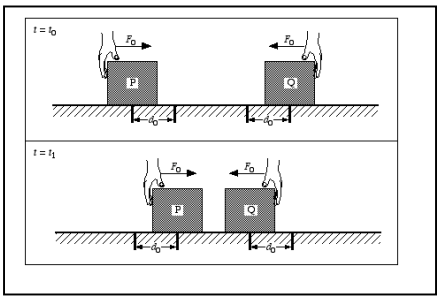
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Since there is a change in distance there is work being done.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Since there is a change in distance there is work being done.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *The same size mass is going the same distance.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *The hand is moving the block.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

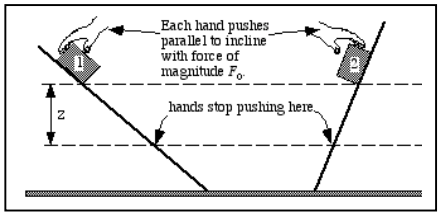
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *In one dimension we have to set up a postive and negative distance.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *The work is absolute.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



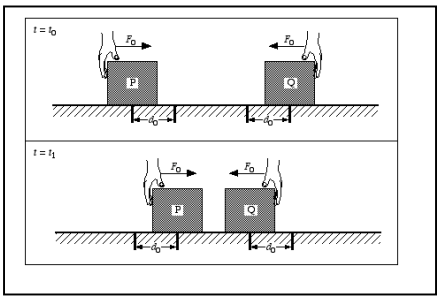
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *up is positive and it keeps the block from falling.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *same*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *its all the same!*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *distance is neg. W=fd*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

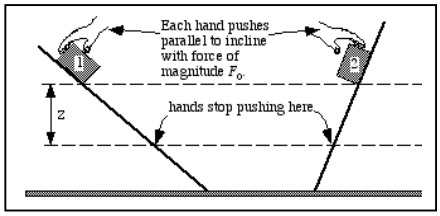
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *right is positive direction and left is negative direction.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *equal and opposite= 0*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



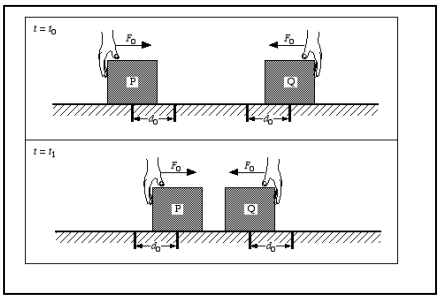
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is zero.
Explain. *because the ramp does most of the work*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is zero.
Explain. *because it is a frictionless surface and gravity does all of the work*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *because both surfaces are frictionless, so the incline is disregarded*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *Its not being worked against*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

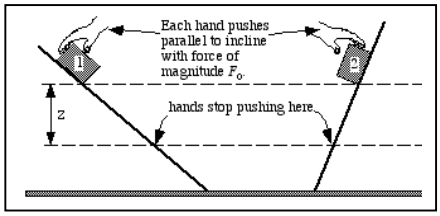
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *because direction doesn't make force negative*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *because the work is doubled since it is twice in the system*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



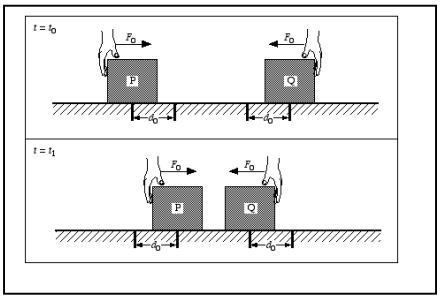
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is zero.
Explain. *There is no effort*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *does not need someone to push it.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain.

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *no work done*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

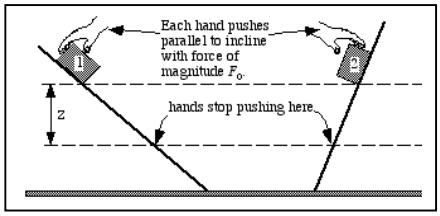
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *they are going opposite direction*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
Fo do
Explain.

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



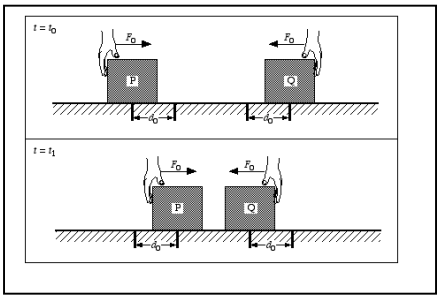
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The work done by gravity is in the positive direction, and the work done by the hand is in this same direction. Therefore the work is added and is paoistive*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *It is the same case, gravity has work on the block in the same positive direction as the work done by the hand.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *The absolute value of the work done by the hand on one is less because the incline is steeper for block two. Since there is a steeper slope the hand has to exert more work on the block to keep it controlled and moving down the ramp. The hand on block two has to fight gravity more than with block one.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *The block does not do any work on the hand therefore the work is zero.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.

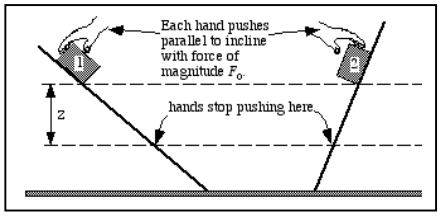


Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *The work done on block P is positive, because it moves block p in the positive direction. The work done on block q is negative because it moves the block in the negative direction.*

Define system R to consist of Blocks P and Q.
Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *Since the work is found by distance times force, the net work is twice that since you change the negative work to a positive number for block q. And the work done on each block is the same so you multiply it by two.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



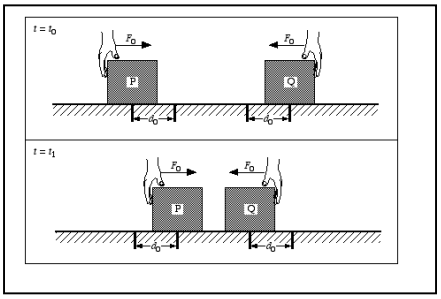
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *In this case, the block is being accelerated a certain amount over a certain distance, and thus the work must be positive.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *The block is being accelerated over a certain distance, thus the work is positive.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *The block is being affected by a force over a larger distance and thus has more work performed on it.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *The force in this case is against the hand, but it is still accelerating in the same direction as the block, meaning the work must be against the net force on the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

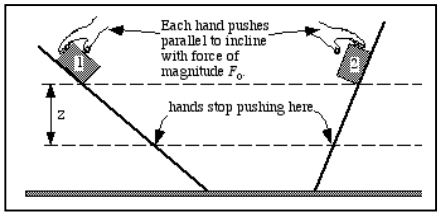
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *In each case, the block is undergoing a force in a certain direction, and goes a certain distance in this direction. Regardless of which way is positive, the two will cancel out and become positive.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *The net force on the system R is zero; thus, even times distance, it is still zero.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



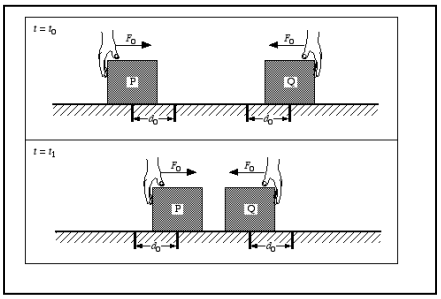
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Work is force times distance or the change in kintetic energy, as the potential energy lessens as it goes down the incline the kinetic energy increases, so there is posative work.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *For the same reason as above, but it's going in the negative x direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *It is equal, because they move throught he same distance and the forces are also equal*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *The force on the hand by the block is a normal force, and it is not moving energy into or from the system*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.

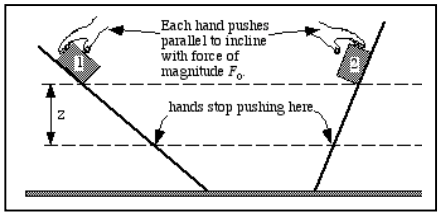


Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *FxS=W, the movement in the posative versus negative direction should change the sign*

Define system R to consist of Blocks P and Q.
Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *The work to the positive direction equals and cancels that to the negative direction*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



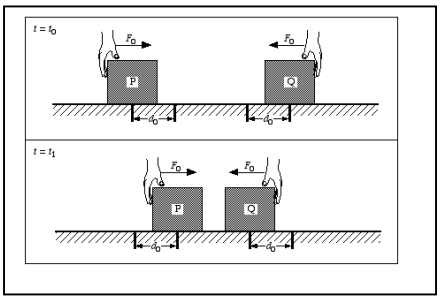
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *because the work is already moving downward so the work is in the same direction of the acceleration.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *Because its the same as the work done on block 2.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *because the acceleration is great for block 2 so the hand has to apply less force and therefore do more work*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *because the work done on the block by the hand is negative so this one must be positive…duh*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is zero.

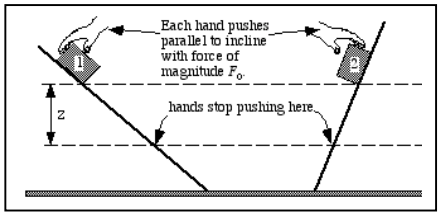
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is zero.

Explain for both questions above. *because work requires a change in potential energy. in other words lifting the blocks up would require work*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *because there is no work being done on block P or block Q so pretty much 0+0=0*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



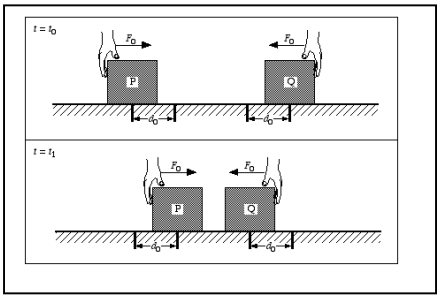
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is negative.
Explain. *If the positive s axis is designated as up the slope, then the hand would be pushing negatively.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *Same as Q5.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is equal to the work done on block 2 by the hand.
Explain. *They both push with the same force.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is positive.
Explain. *Since I defined the positive x axis as up the slope, the block would be pushing positively against the hand.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

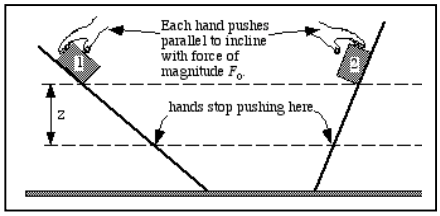
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *If the positive axis is defined as to the right (conventionally), then the hand is pushing positively on block p and negatively on block q.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *The equal and opposite forces add together to be 0.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



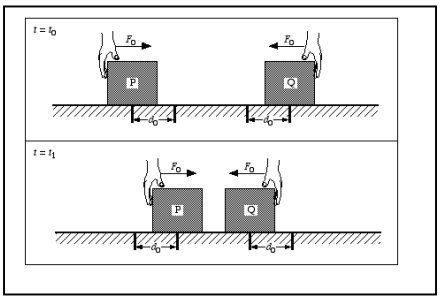
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Because there is external pressure being put into the system*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *The hand brings positive external pressure into the system.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *Block 2 has less of an angle and so it has gravity pulling down more on it than block 1.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *It is sending pressure out of the system.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is negative.

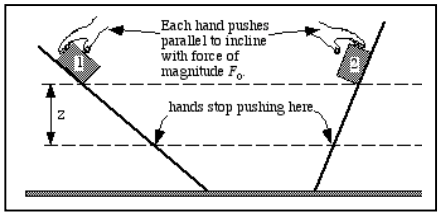
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *External pressure going into the system, internal pressure going out of the system.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
2 Fo do
Explain. *Each hand does FoDo work on one block. Since both block are the same we can just double the work value.*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



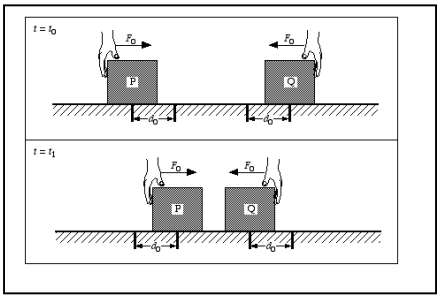
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *If the hand is pushing the block down an incline than the work would have to be positive b/c the force due to gravity*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Again it would have to be positive b/c the hand is pushing w/ gravity and the force due to gravity would push the block down the incline w/o the hand*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is less than the work done on block 2 by the hand.
Explain. *The incline of block 2 would be greater b/c the incline is steeper*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *the block pushes against the hand in the oppisite direction causing the work to be negative*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

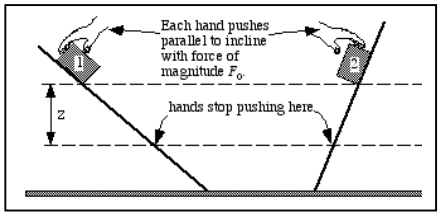
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *The work would have to be positive b/c the hand is exsherting a force in the direction of motion*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *the work done on each block in the oppisite direction so they would cancel out*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



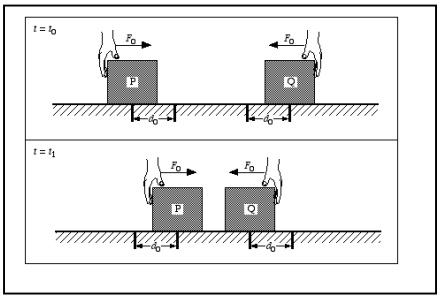
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *giving it some sort of force*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *work moving downward*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *More force on less steep plane*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *pushing back at the hand*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

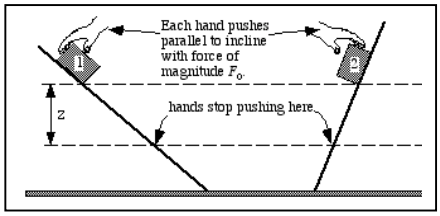
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is positive.

Explain for both questions above. *both pushing in their own positive direction*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *works cancel each other out*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



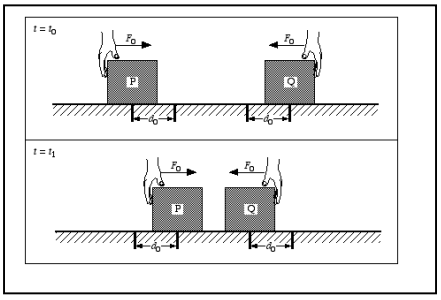
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *The work is positive because the direction of the force is in the positive x direction*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *The work is negative because the direction of the force is in the negative x direction*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *the work done by hand two is less because it is aided more by gravity than hand 1*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *The work done on the hand by the block is zero, because the block is not moving the hand over any distance.*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

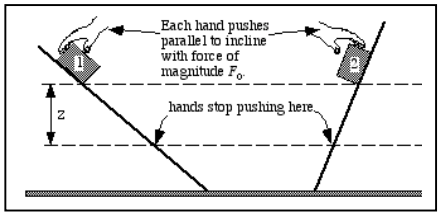
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *Assuming that the positive x direction is to the right, since Work is Force*Distance, the work of hand 1 is positive, while the work of hand 2 is negative*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *since they are equal amounts of work, and in opposite directions, they therefore cancel eachother out and create a net work of 0*

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *parrellel to the surface and in the opposite direction of the*

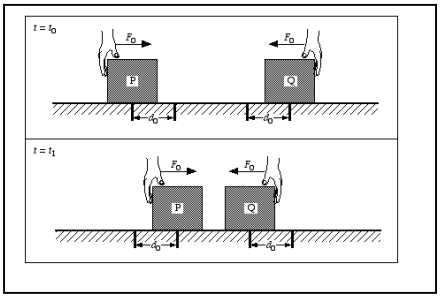
also it is to right

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is negative.
Explain. *left*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *the slope of the surface determines the magnitude.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is negative.
Explain. *left*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
unanswered

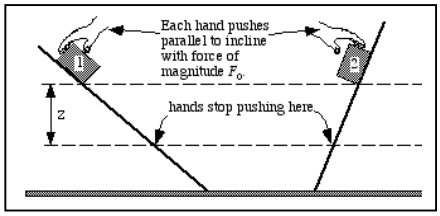
Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
unanswered

Explain for both questions above.

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
unanswered
Explain.

Two blocks are pushed down frictionless ramps of different steepness, as shown. In each case, the hand pushes parallel to the incline with a force of magnitude F_o. Each block is pushed through the same vertical distance Z.



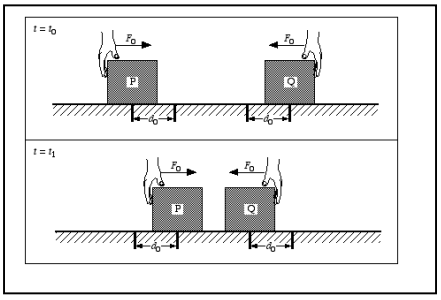
Q4. Is the work done on block 1 by the hand *positive, negative* or *zero?*
The work done on block 1 by the hand is positive.
Explain. *Work equals force times distance, and assuming both are positive down the incline work is positive.*

Q6. Is the work done on block 2 by the hand *positive, negative,* or *zero?*
The work done on block 2 by the hand is positive.
Explain. *Like Q4 and 5, the hand is still doing positive work.*

Q8. Is the absolute value of the work done on block 1 by the hand *greater than, less than,* or *equal to* the absolute value of the work done on block 2 by the hand?
The work done on block 1 by the hand is greater than the work done on block 2 by the hand.
Explain. *The incline of block 1 is more shallow so the diagonal distance is greater than that of block 2, so the hand does more work on block 1.*

Q10. Is the work done **on** the hand **by** block 1 *positive, negative,* or *zero?*
The work done on the hand by block 1 is zero.
Explain. *zero because the block is not moving the hand*

Two identical blocks, P and Q, are at rest on a flat, frictionless table. Beginning at time $t = t_o$, block P is pushed by a hand exerting a force of magnitude F_o to the right, and block Q is pushed by a hand exerting a force of magnitude F_o to the left. At time $t = t_1$, each block has moved a distance d_o from its initial position, as shown.



Q12. Is the work done on block P by the hand *positive, negative,* or *zero*?
The work done on block P by the hand is positive.

Q13. Is the work done on block Q by the hand *positive, negative,* or *zero?*
The work done on block Q by the hand is negative.

Explain for both questions above. *the distance is positive for block P and negative for block Q.*

Define system R to consist of Blocks P and Q.

Q15. What is the absolute value of the *net work* done on system R?
0
Explain. *the positive and negative work magnitudes are equal so they cancel each other out in opposite directions.*