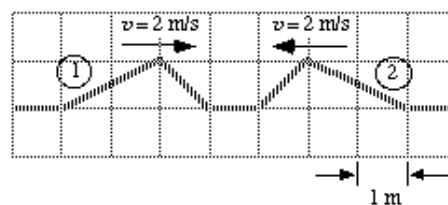


- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. the pulses will pass each other and be the same afterwards

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. the pulses continue after crossing

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

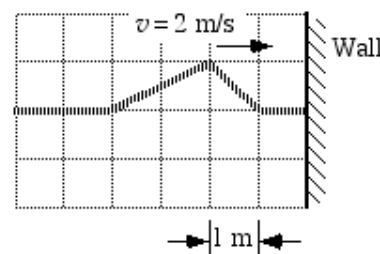
Explain. the pulses have crossed

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

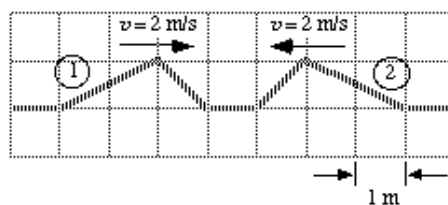
Figure d.

Explain. when the pulse hits the wall it is reversed



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. i dont know

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. i dont know

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.

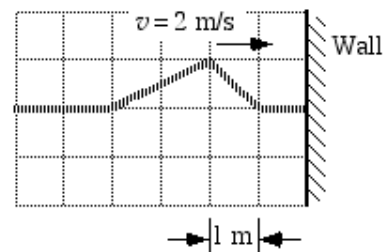
Explain. they are the same

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

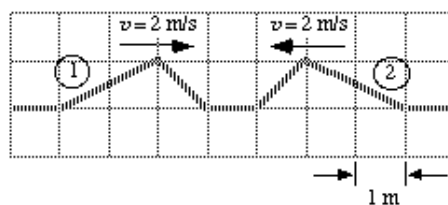
Figure e.

Explain. bounces off the wall with the same velocity



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. The waves will constructively interfere with each other in this way. It is the sum, as it were, of the two waves.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. The waves are no longer interfering with one another. They have passed through each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

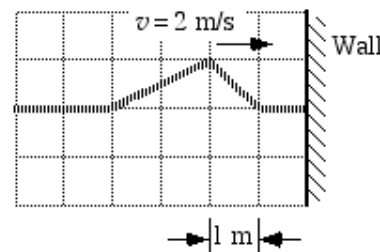
Explain. In both responses, the crest of pulse two is to the left of that of pulse one.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

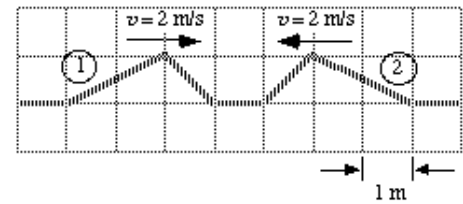
Figure c.

Explain. Solid surfaces reflect waves out of phase.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.
Explain. I guessed.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure d.
Explain. The springs are going to repel at the same rate that they collided, conservation of energy.

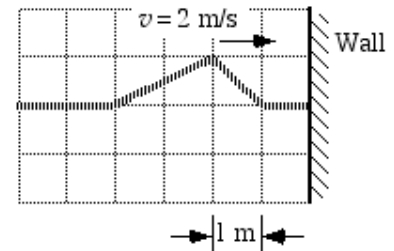
Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.
Explain. If they are the same how could you tell?

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

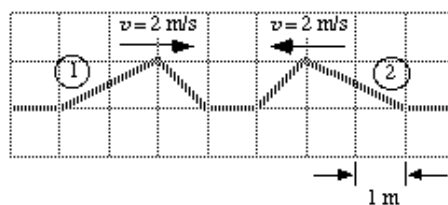
Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

Figure d.
Explain. I guessed.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. C is both pulses combined one second later.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. It seems logical that the pulses would change shape so C is both pulses after they have passed through each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

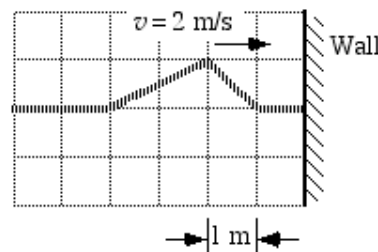
Explain. Its a logical assumption.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

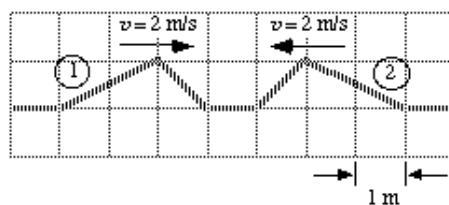
Figure c.

Explain. This is purely a guess.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure g.

Explain. The two asymmetric pulses going in opposite directions at same magnitude are going to cancel each other out. So the spring is going to look like nothing is happening to it.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure g.

Explain. For same reason as question 6.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

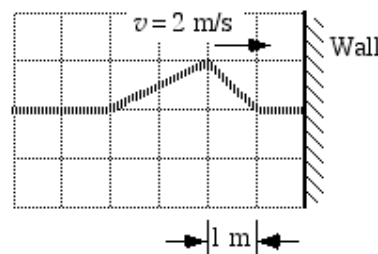
Explain. The pulses cancel. This is just a given proof of the natural tendency for symmetry to make things easier in physics.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

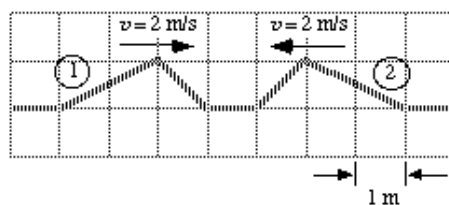
Figure e.

Explain. This is a proof of the wavelike behavior of the spring.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. both pulse are moving in one second, they combine together to get a new shape

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. two pulses continue to move after one second, the new shapes as figure c

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.

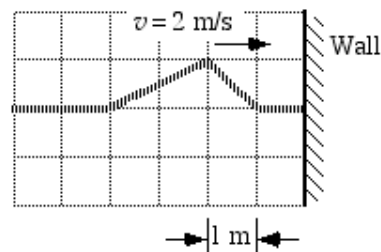
Explain.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

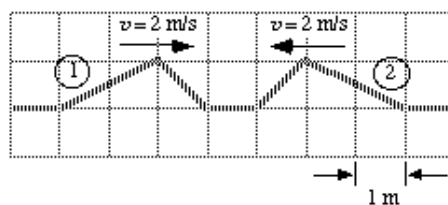
Figure b.

Explain. I do not know



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. the pulses should add together in phase

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. the pulses should be unchanged after they pass each other

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

Explain. the pulse

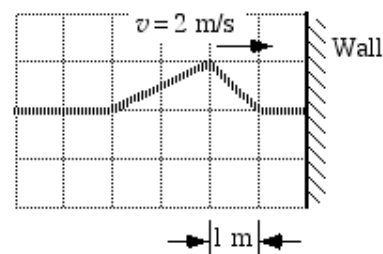
- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

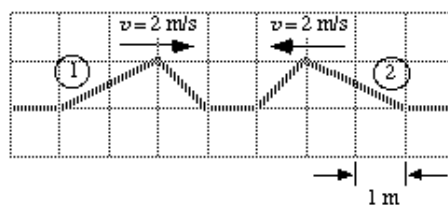
Figure d.

Explain. I don't know I JUST CAN'T EXPLAIN BUT I THINK I'M RIGHT

END OF RESPONSE



- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. The result of the two spring pulses colliding will have an amplitude that is the sum of the original amplitude of the two spring pulses.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. After the collision the springs will be in their original position but they will travel in the opposite direction.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

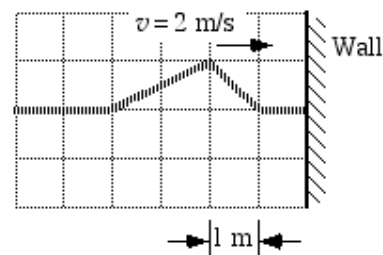
Explain. The pulses travel in a continuous line down the spring. When a pulse encounters another pulse, the amplitude at that point increases but the pulse continues in the same direction. The pulse's amplitude, velocity, and direction are not affected by the collision.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

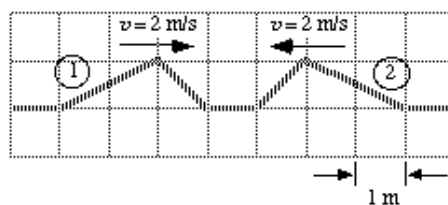
Figure d.

Explain. After colliding with a wall the amplitude of the pulse will be reflected to the other side of the spring as it is reflected back in the direction from which it came.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. The shape of the pulses do not change. They just shift... So adding the two shapes would give figure c.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. The wave should be the same as before except the shapes move forwards 4 meters.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

unanswered

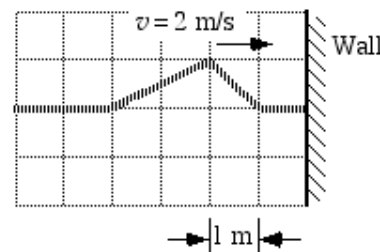
Explain. The pulses are the same shape after they collide.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

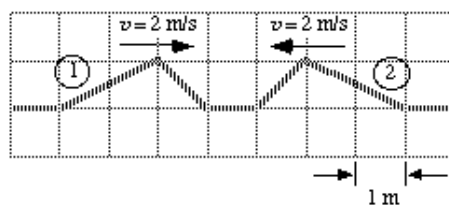
Figure c.

Explain. The wave reflects off the wall and ends up on the opposite side.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. Superposition of the waves...although it is hard to tell exactly without drawing it out

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. Same just 2 seconds later

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

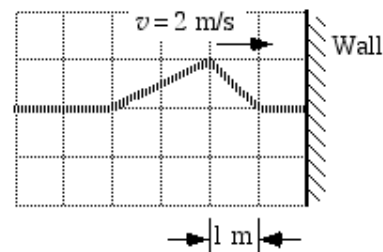
Explain. They move as though they are independent of each other

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

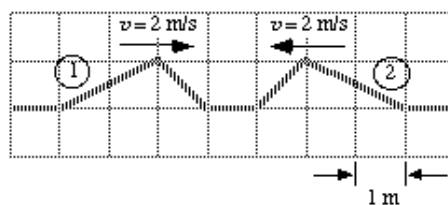
Figure e.

Explain. Each piece of the wave was reflected by the wall, the wall turned the wave around



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Choice h. none of the above

Explain. because its a nice graph

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure e.

Explain. it has the best lines that look like the spring

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

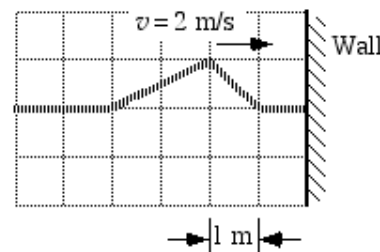
Explain. because they are equal and opposite

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

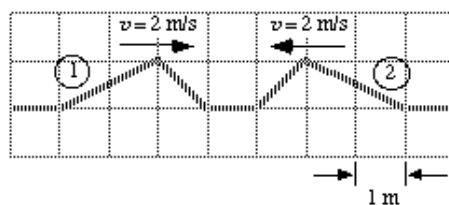
Figure c.

Explain. because it looks most like th one that i would choose in my head.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure a.

Explain. The two pulses will add, resulting in the shape of figure A where the height is twice that of a single pulse.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure c.

Explain. The heights will remain the same, as will the shape. This means it cannot be a because there the shapes are reversed from before

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

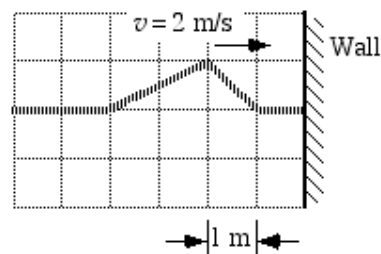
Explain. The pulses will effectively pass through each other, resulting in a switching of positions relative to the center.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

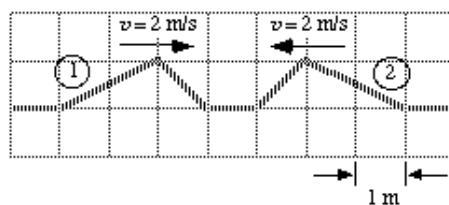
Figure e.

Explain. When the pulse hits the wall, it will rebound with the same shape and size as before, just going in the opposite direction



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. I think the waves will add together.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. The same shape waves will proceed in the same direction.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

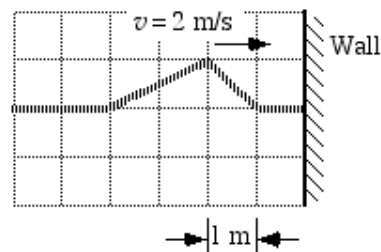
Explain. I think they will move through each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

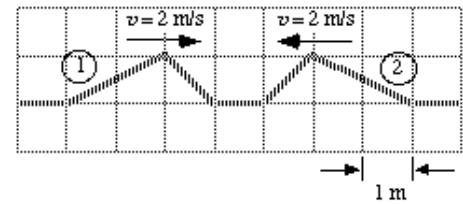
Figure d.

Explain. It will come back on the bottom, moving to the left.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure g.

Explain. the pulses interfere and cancel

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure b.

Explain. just a guess...sorry

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

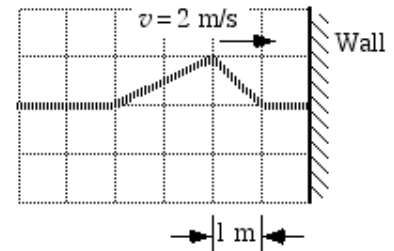
Explain. energy is conserved and transferred so the pulses continue along.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

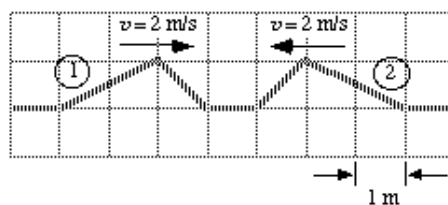
Figure d.

Explain. refraction?



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. By using superposition

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. understanding of general mechanics

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

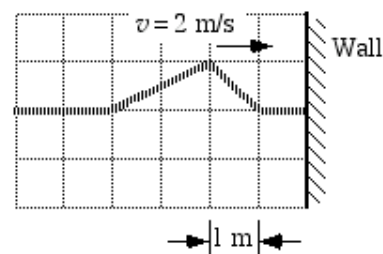
Explain. wave reflection

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

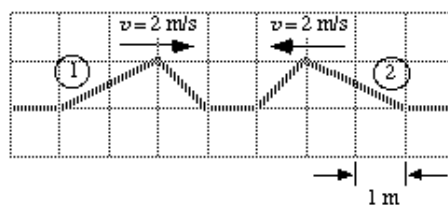
Figure e.

Explain. reflection



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. the pulses are in opposite direction, their magnitude should sum up.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure d.

Explain. After two seconds, the two pulses should pass each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

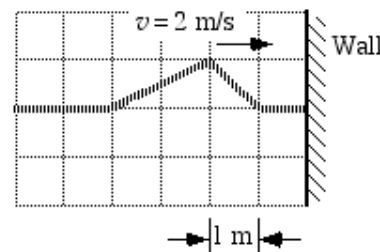
Explain. Because after two seconds, the position of the pulse should pass each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

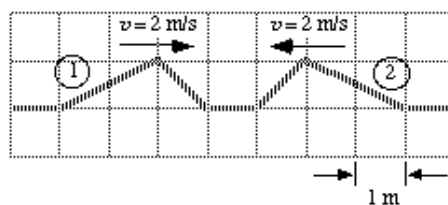
Figure d.

Explain. The pulse will bound back when it reaches the wall after 1 second.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. The two waves collide and join

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. The waves past each other and separate

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

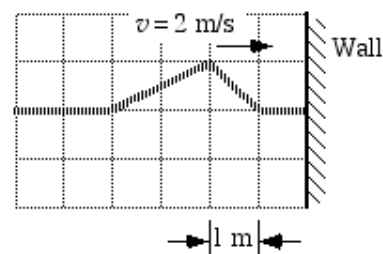
Explain. The waves past each other

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

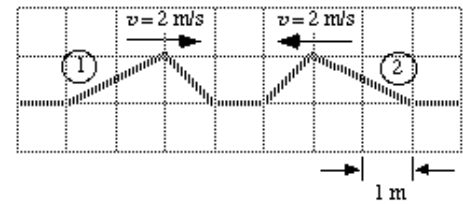
Figure d.

Explain. The wave hits the wall and reverses.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure b.

Explain. The pulses will to get a larger pulse in the middle.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. After the pulses pass each other, they will seperate, giving figur

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

unanswered

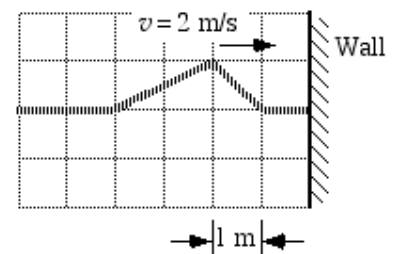
Explain. The pulses add together, not cancel, it is differentiate them and they are not always on one or the other side of each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

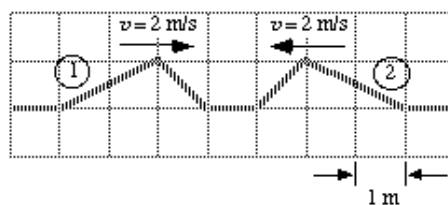
Figure e.

Explain. The pulse will reflect back mirroring the original pulse



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure e.

Explain. using the law of superposition, you can add the pulses as vectors in each respective grid box

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. using the law of superposition, you can add the pulses as vectors in each respective grid box

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

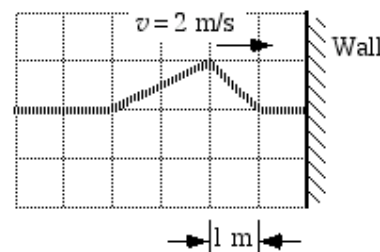
Explain. the pulses can be added using vector superposition when they occupy the same space, but after they pass each other, you are just adding vectors to nothing, resulting in the original setup with each vector translated 4 units

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

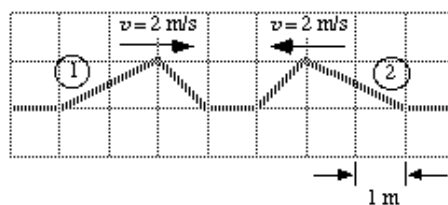
Figure e.

Explain. i'm not quite sure why, but the spring will 'bounce' off of the wall, mirroring itself in the other direction



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure g.

Explain. Well this is new to me and i guess i just figure that the next second the two pulses will collide and they will, effectively, cancel each other out like super positioning ??

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. well since in question 5/6 i noted that they would effectively cancel each other out, after 2 seconds there would be no shape (or linear) because they were already.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

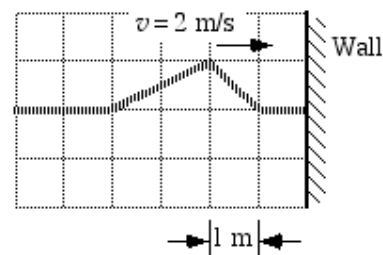
Explain. I am using the superposition thought, since they are traveling with the same velocity/magnitude, then they should cancel each other out.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

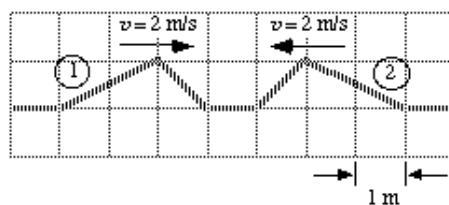
Figure e.

Explain. now we have it traveling and hitting a fixed surface. Since we can assume it is frictionless and a 'perfect' spring then it will bounce off the wall and travel 4 m to the left.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. the waves will collide and constructively interfere at around 1s and will start to get smaller at around 2s

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. the waves should return to there original size

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

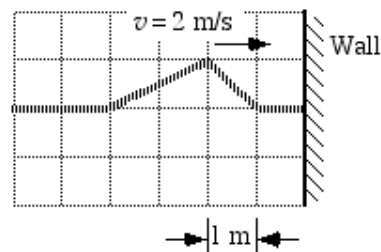
Explain. they keep traveling in the same directions

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

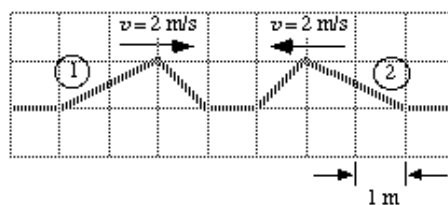
Figure c.

Explain. the wave should reflect and have the opposite amplitude after it hits.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. I think that it is a because the two pulses will add together to give a larger single pulse one second after the snapshot is taken.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. I reason that it is c because we can think that each pulse will move 4 meters and be independent of each other at that point and thus will look like c.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

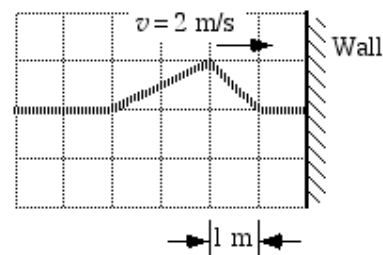
Explain. In both cases the pulses pass each other and hence they reverse positions and 1 then is on the right and 2 is on the left.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

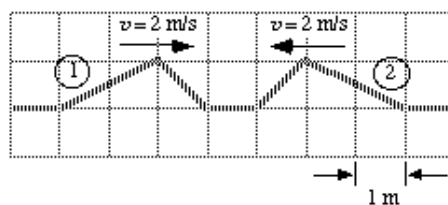
Figure e.

Explain. I think it is e because the pulse will not change itself but its direction will after it hits the wall. The pulse travels 6 meters in 3 seconds which is also represented here.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure b.

Explain. The amplitude will be twice as large, and the period is also larger.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. it is reverse of the starting snap shot.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

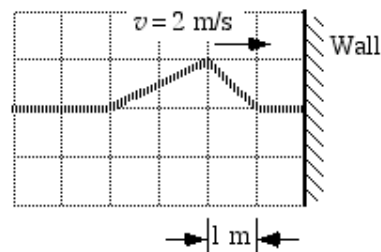
Explain. the pulses continue to travel in the direction they were originally traveling.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

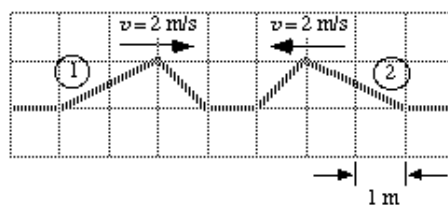
Figure e.

Explain. it reverses.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure d.

Explain. After 1 second the peak of each pulse will be 2m from their original positions, and when they cross each other they will add to each other.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure c.

Explain. After 2 seconds, the displacement of each will be 4 meters.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

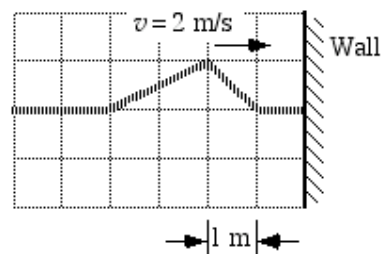
Explain. I used the peaks of each pulse to track their positions.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

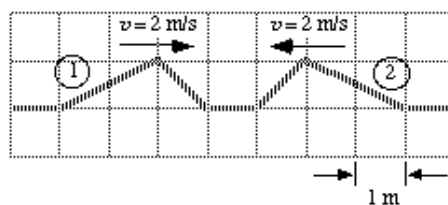
Figure d.

Explain. The wall exerts a force downward on the spring.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure g.

Explain. it seems that both pulses with the same fequency and amp will cancle each otehr out once they reachoether

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. if bot pulses cancel eachother out there should not be a remaing pulse tat will continue further

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

unanswered

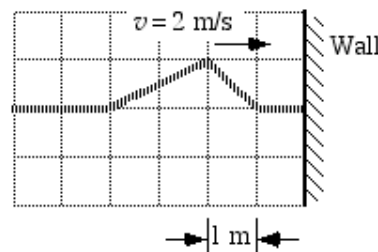
Explain.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

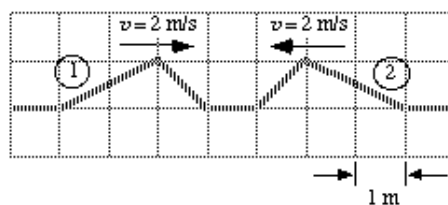
Figure b.

Explain. I believe that the pulse passes throught the wall and nolonger exists on the spring



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. since it is moving 2 m/s, then the spring will be 2 meters from where it is now

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. It should be equal to where it was when it started.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.

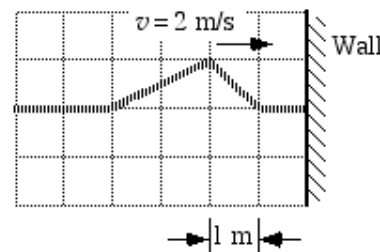
Explain. It is impossible to tell which is which.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

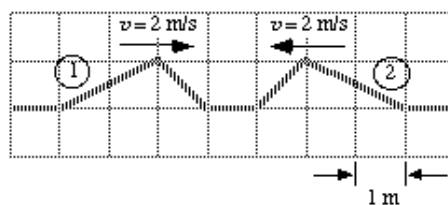
Choice f. none of the above

Explain. I would have thought it would be 1 meter from the wall.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. The pulses move at 2 m/s so the pulses will be one meter apart a second later, traveling away from each other, this corresponds to figure c.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. Again, the pulses are moving at 2 m/s but now, at 2 seconds later they're moving away from each other. The pulse initially on the left will be on the right, and the pulse initially on the right will be on the left. They'll be 5 m apart.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

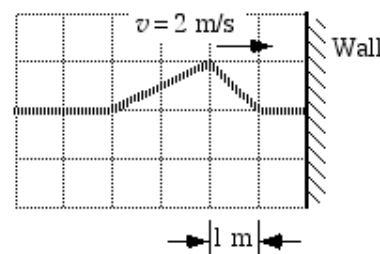
Explain. The pulses continue in their initial direction, so pulse 2 heads to the left, and pulse 1 heads to the right.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

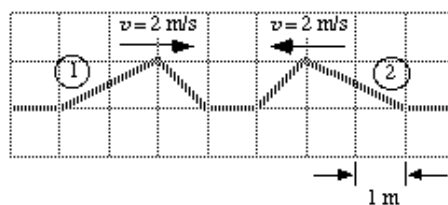
Figure e.

Explain. The pulse will bounce off the wall, and travel in the opposite direction. At 3 seconds it will be 4 m from the wall, moving away.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure d.

Explain. Because that is what it looks like.. I am just guessin

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure c.

Explain. Conservation of energy.. and they would have to be reversed because I don't think they would bounce off of each other they would just keep flowing through.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

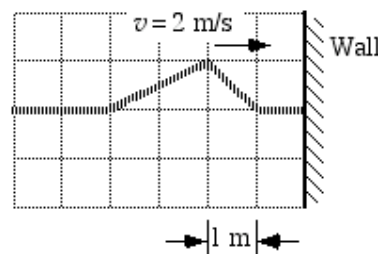
Explain. They do not blend they exchange places because they are both positive

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

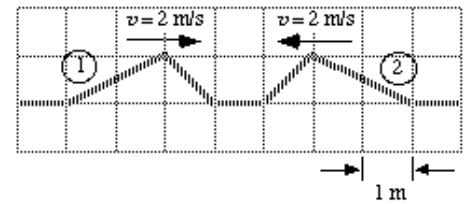
Figure e.

Explain. It just bounces off of the wall and returns in the same form.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. Dampening effect of the collision would cause the symmetry of the object to restore.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. Represents the resumption of normal oscillation in an ideal environment.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.

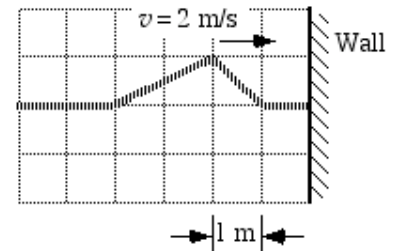
Explain. Not sure, just seems right.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

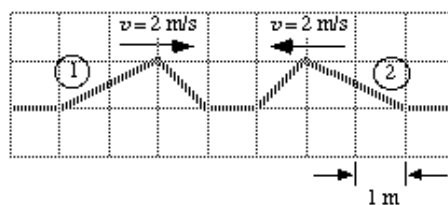
Figure e.

Explain. The spring will be repelled in the opposite direction.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. The waves add up

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. they keep the same shape as they move

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

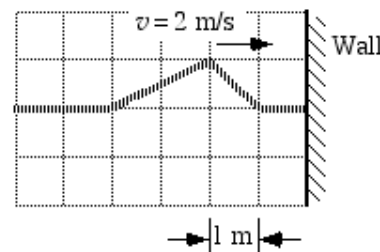
Explain. The pulses keep moving

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

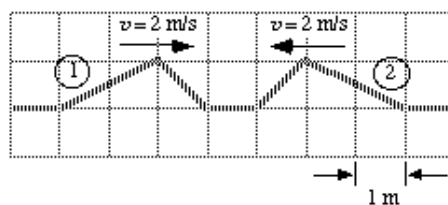
Figure e.

Explain. it bounces off the wall



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure e.

Explain. at one second the pulses will add as shown.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure c.

Explain. After two seconds the two pulses will have moved apart and continue away from each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

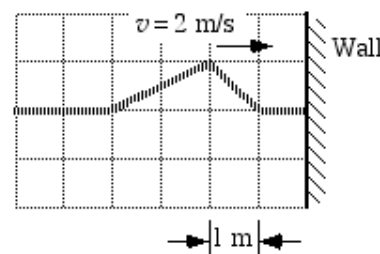
Explain. pulse one is traveling right and pulse two is traveling left, as they pass each other they change sides.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

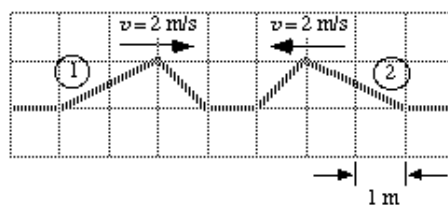
Figure d.

Explain. After 3 seconds each individual part of the pulse will have moved 6 meters total, so it will look something like figure D.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure g.

Explain. I chose figure g because I think the pulses will just cancel each other out.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. I chose figure g because the pulses cancel.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

Explain. The pulses cancel because they're going toward each other at the same speed.

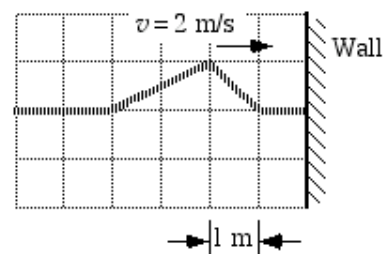
- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

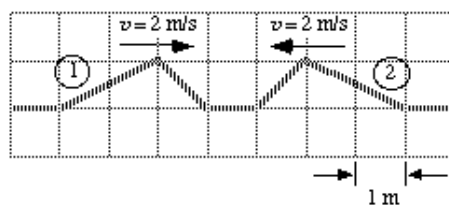
Figure c.

Explain. I chose figure c because the pulse will reflect back from the wall.

END OF RESPONSE



- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second after the snapshot above was taken**

Figure d.

Explain. I literally just added the height of each peak after 1 second together. This figure is the only one that results in the correct height at each peak.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds after the snapshot above was taken**.

Figure c.

Explain. The pulses have passed through each other and are no longer adding or subtracting from each other. They have the exact same shape, and their position is given by simple kinematics.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

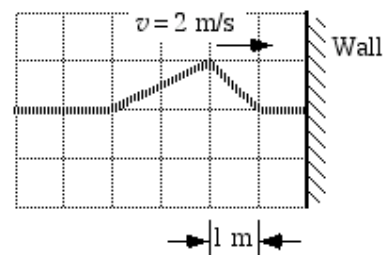
Explain. The pulses travel through each other, adding together at each instant but not affecting one another in any direct way. because of this, pulse 1 moves to the right constantly, and pulse 2 moves to the left.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds after the snapshot above was taken**.

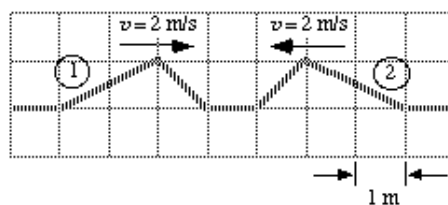
Figure e.

Explain. The pulse will have the same shape and orientation relative to its motion. Since it is moving the opposite direction after it has hit the wall, the orientation must change as well, to face left.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second after the snapshot above was taken**

Figure b.

Explain. When 2 seconds have elapsed, the two pulses meet and make that shape since they will pass through each other without affecting the other.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds after the snapshot above was taken**.

Figure a.

Explain. They will have passed through each other without affecting each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

Explain. They travel as if the other is not there, so pulse one goes from being on the left to being on the right and pulse 2 goes from right to left.

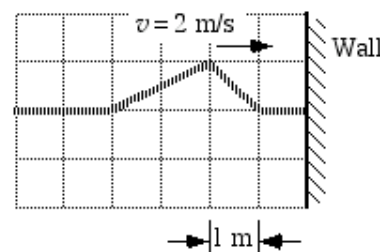
- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds after the snapshot above was taken**.

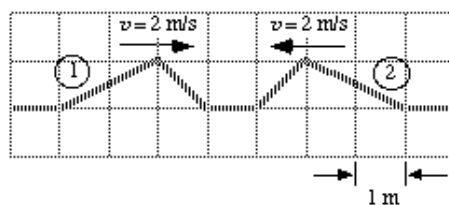
Figure e.

Explain. The pulse has gone toward the spring, then bounced back, turning around.

END OF RESPONSE



- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure a.

Explain. Because, they are both positive so the amplitude would add up to be higher. Also they have equally same speed and same amplitude for initial condition.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure c.

Explain. They crossed and pass through

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

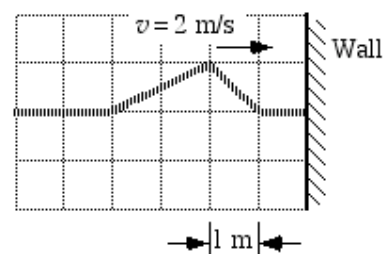
Explain. after they meet then pass by.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

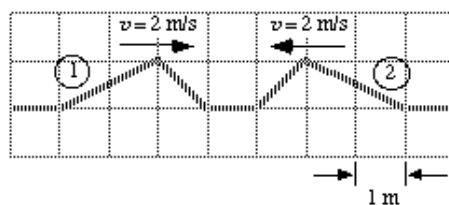
Choice f. none of the above

Explain. it would look like C however, it more closer to the wall than C.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. after a second the pulses will bounce from each other, but they still would produce a sum, which is greater in height than any of the individual pulses

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. no energy is lost, thus the pulses would have the same shape, but since they exert equal and opposite force on each other, they would move in the opposite direction from their initial direction

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

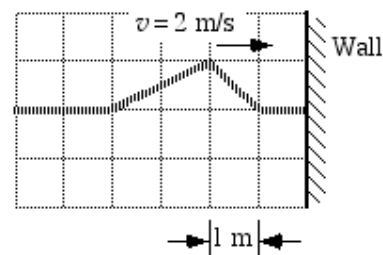
Explain. the pulses exert equal but opposite forces on each other, thus since there is no dissipative force they would bounce back

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

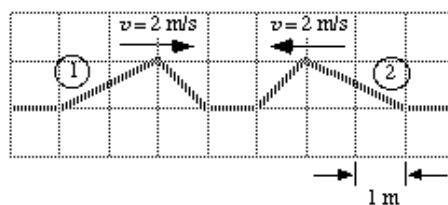
Figure d.

Explain. the pulse would reflect from the wall making the same angle as when it hit it.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure e.
Explain. guess

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure b.
Explain. guess, simple harmonic motion oscillates

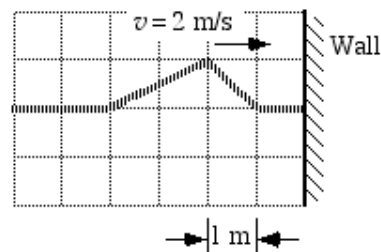
Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.
Explain. almost same

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

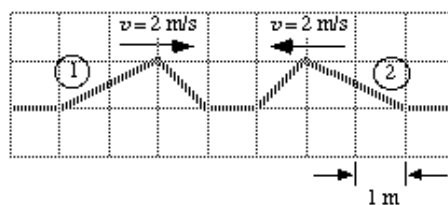
Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

Figure c.
Explain. simple harmonic motion oscillates



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. the amplitudes of the waves add together

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. the waves continue on as if they had never collided

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

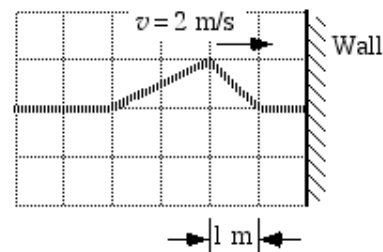
Explain. pulse one was traveling right and after crossing pulse 2 it'll be on the right

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

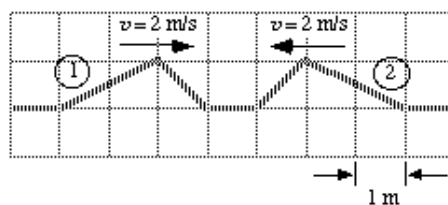
Figure d.

Explain.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. since the waves move at 2m/sec the peak of one wave will be displaced by 2 meter at the same amplitude.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. the waves are independent of each other and there are no external forces to decrease their speed or amplitude.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.

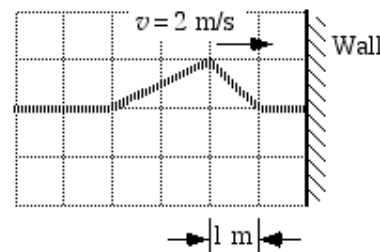
Explain. the pulses looks very similar so its hard to tell.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

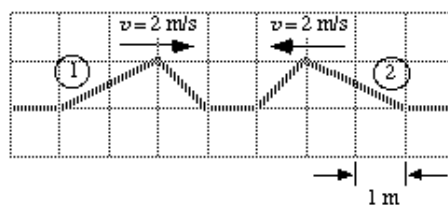
Figure d.

Explain. by intuition.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure e.

Explain. the heights of the shifted waves are added at each individual point.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. the waves have just moved past each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

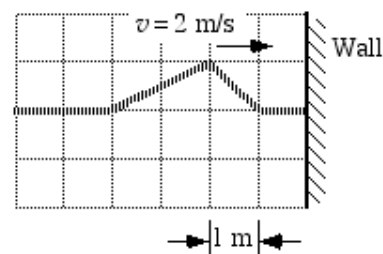
Explain. The pulses move through each other without a change in direction

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

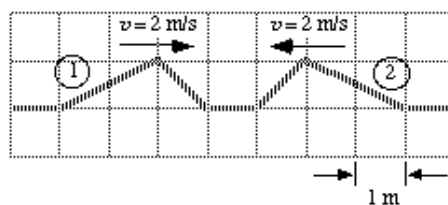
Figure a.

Explain. the wave is mirrored off the wall.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure b.

Explain. after one second the two pulses are fully added together.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. The waves have opposite directions so after they add to together for that brief time, they then continue moving in their original direction.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

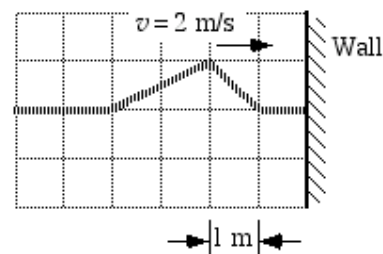
Explain. I explained it in question 8.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

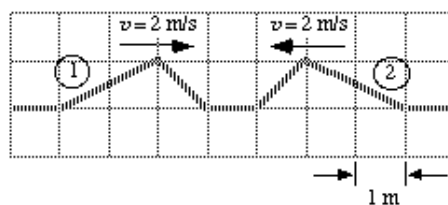
Figure d.

Explain. It seems like the wave would be reflected upside down.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. They will add together to produce this shape

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. They continue in the same manner as before they collided

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

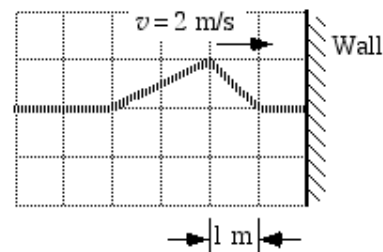
Explain. They have travelled past each other and now continue in the same manner as before.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

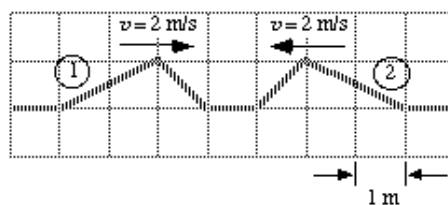
Figure e.

Explain. It will bounce back as a reflection of the original.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure e.

Explain. the peaks of each wave will be past one another after one second has passed. i don't think that the waves will necessarily amplify one another.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure d.

Explain. the waves will continue on their original paths in opposite directions

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

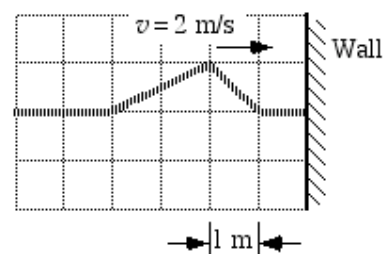
Explain. the pulses obstruct one another and cause the waves to rebound off one another

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

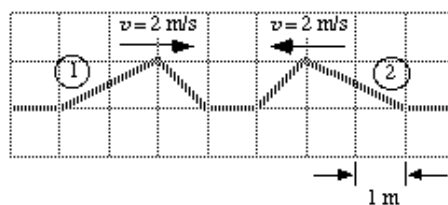
Figure d.

Explain. the wall obstructs the wave/pulse so it goes in the other direction. its peak is in the other direction from before.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. at $t=1$ sec the pulse isn't quite at it's maximum

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. The pulse is has reduced to zero.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

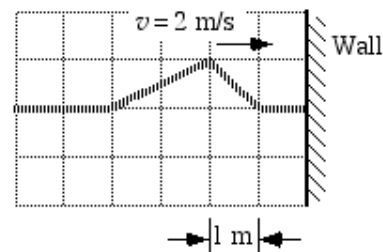
Explain. I don't know.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

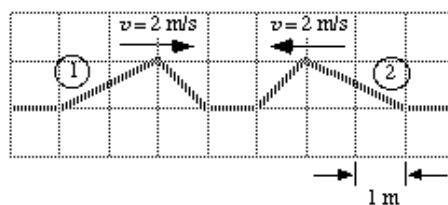
Figure c.

Explain. I don't know why.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. The waves meet up in the middle, and then begin to move away from each other after colliding

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. The two waves must move apart and the short side of the wave must lead in the direction of travel, namely away from the sight of the collision.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.

Explain. We did not specify which pulse was 1 and which was 2 in the beginning, so we certainly can't do so afterwards either.

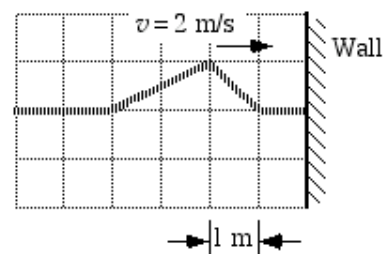
- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

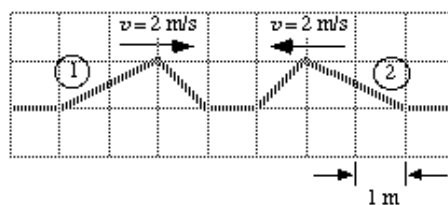
Figure e.

Explain. The short side of the wave must lead the direction of the wave travel.

END OF RESPONSE



- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure e.

Explain. The two pulses will combine and be levelled out due to the collision.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. After a little while the two springs will return to their previous forms traveling in the opposite direction.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

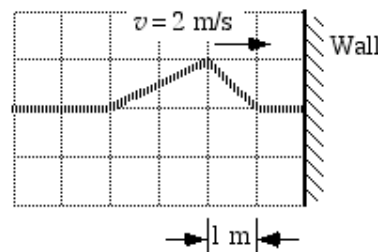
Explain. The two pulses will hit each other and bounce off after the collision.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

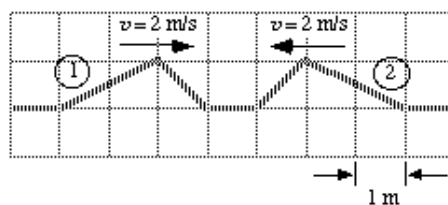
Figure e.

Explain. The pulse will rebound and travel in the opposite direction.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure b.

Explain. they add up

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure b.

Explain. same amplitude but different direction

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

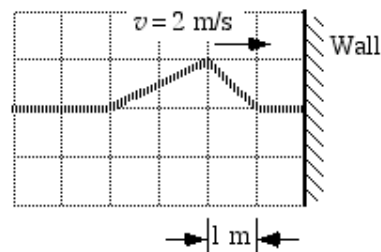
Explain. traveling different direction

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

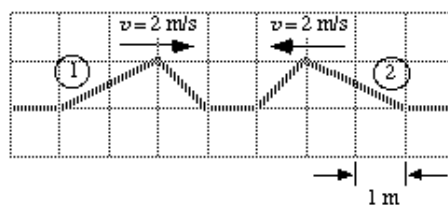
Figure c.

Explain. downside



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. I superimposed the waves, after counting the distance each would travel in the time specified.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. after travelling for two seconds the peaks will be 4 meters from their starting positions.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

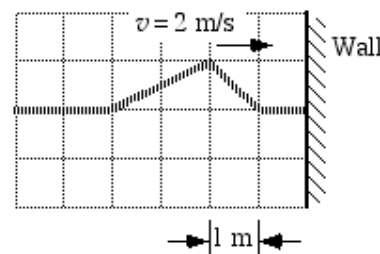
Explain. since the pulses are moving and don't interfere with each other, they will continue to move after passing each other and switch places in the time period described.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

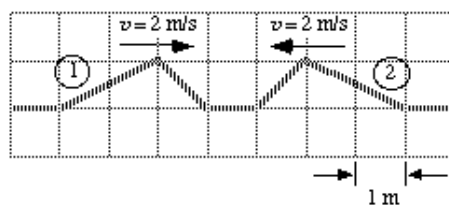
Figure d.

Explain. The pulse will be reflected by the wall, but in opposite orientation. Why I know this I am not sure, but probably from highschool.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Choice h. none of the above

Explain. since the spring must be a sin curve, there is no curve that represents a sin curve.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure d.

Explain. since the amplitudes must be the same, this graph represents the two.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

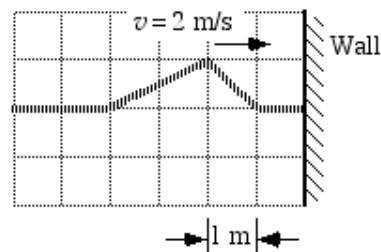
Explain. the two sides are the same and cancel out, the forces act on each other and are opposite

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

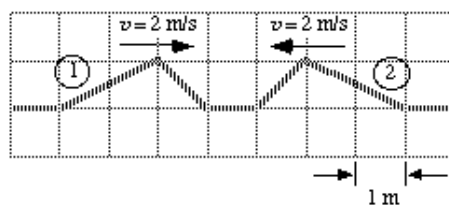
Figure e.

Explain. i dont know



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. Because of superposition, the pulses add where they overlap.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. because once the pulses go past each other, they don't have any affect on each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

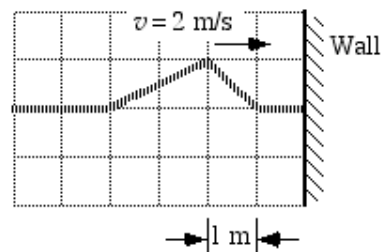
Explain. because each pulse can be solved for independently

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

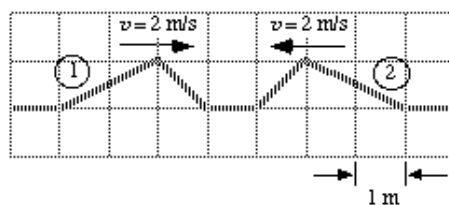
Figure d.

Explain. when a pulse hits a wall, it is reflected back but the phase shifts 180 degrees.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. Superposition of amplitudes.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. After interaction, pulses continue on same path as initially traveling.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

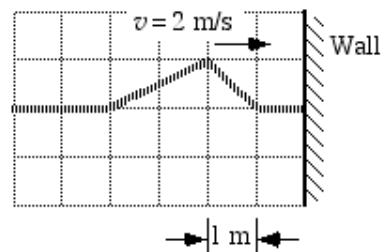
Explain. After interaction, pulses continue on same path as initially traveling.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

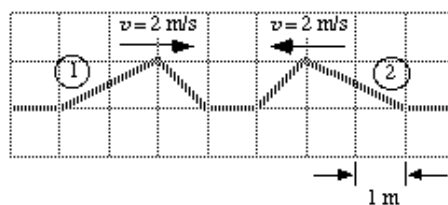
Figure d.

Explain. Once pulse reaches wall, the pulse pulls up but wall must pull down, so the wave is reflected in opposite amplitude back.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure e.

Explain. i chose e because i thought since one's going left and the other is going right at the same rate, that there will be a symmetric line happening at the center like it has at figure e

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. the objects have made contact with eachother and are in the process of bouncing off eachother in the other direction with the same speed as before so it will have a similar shape as before also

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

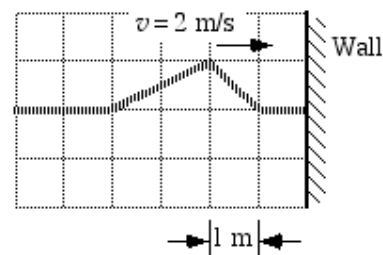
Explain. pulse 1 and 2 always stay in the same position as before but the direction just changes at first going toward eachother and then away from eachother.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

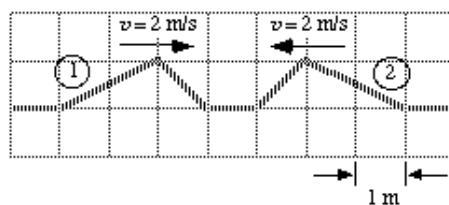
Figure c.

Explain. the figure shows that the pulse is bouncing back and so the shape is shown in figure c as it goes down in the middle and back toward the wall



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. I added the amplitudes as they would be 1 sec from the original picture, or displaced 2 meters

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. since the medium isn't fixed, the waves won't flip to the other side and will be 4 meters displaced

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

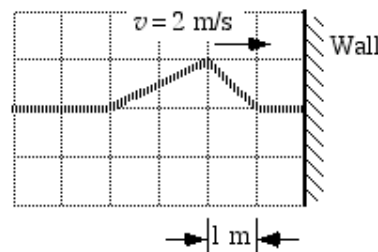
Explain. they both continue their direction and velocity, so they should switch positions with each other

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4: Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

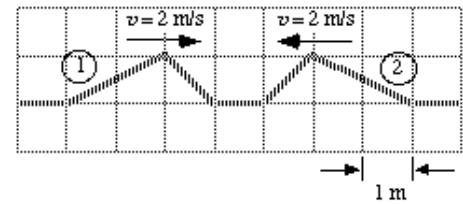
Figure d.

Explain. it is fixed, so the wave will flip and the peak should be 4m from the wall since the velocity is 2 m/s and the original distance from the wall is 2 m.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. the peaks will meet in one second

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. a symmetrical version of what it looked like before

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

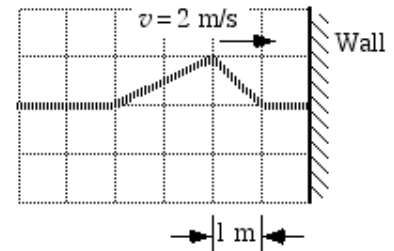
Explain. they bounce off each other

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

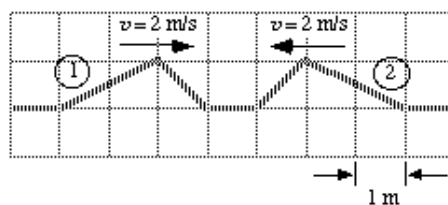
Figure e.

Explain. it will bounce off the wall and go the other way



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure g.

Explain. The two pulses are of equal magnitude and wavelength but are moving in opposite directions. Merely as a supposition, therefore, it seemed to me that an effect similar to the combination of equal but opposite non-wave forces would be probable. And thus, immediate

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. The same as my former reasoning.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

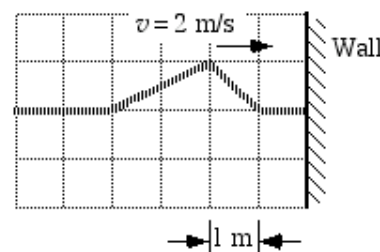
Explain. The pulses are bound in opposite directions.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

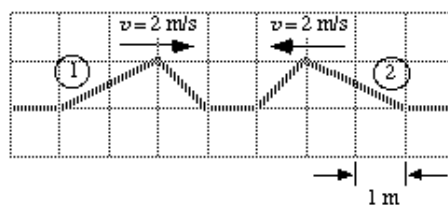
Figure e.

Explain. After colliding with the wall, the force of the pull will be returned to the spring by the wall, due to Newton's third law. However, this force will be opposite, and so, the pulse will travel backwards across the string inverted.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure b.
Explain. superposition

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure d.
Explain. it is actually what I would expect , I base it only on logic

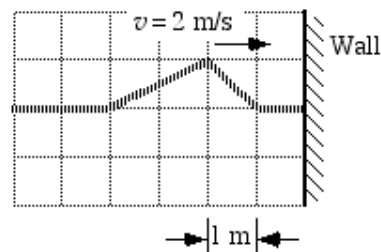
Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.
Explain.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

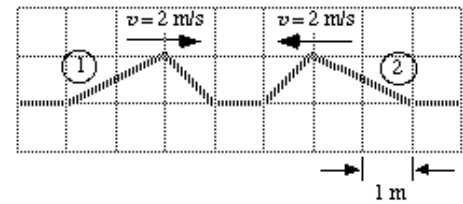
Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

Figure a.
Explain. we know that pulse is traveling at 2 m/s , after three seconds it should bounce of the wall and be in almost identical position as before hitting the wall



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. add amplitudes at each second

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. they pass through each other

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

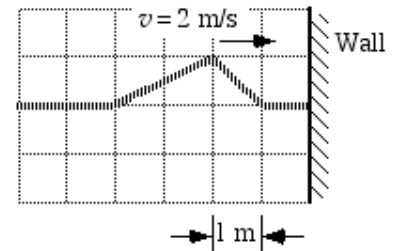
Explain. they pass through each other

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

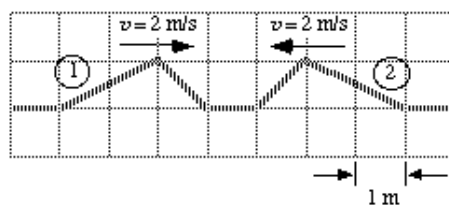
Figure d.

Explain. it inverts itself



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure d.

Explain. Intuition. And probably bad intuition at that. I'm not very familiar with this at all. :)

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure c.

Explain. Again, mostly intuition. It seems that the pulses will just simply 'change places' after the pseudo-collision. Meaning, relatively elastic.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

Explain. The I-word from above. I guess I'm reading the book later, once I know what chapter/sections to read.

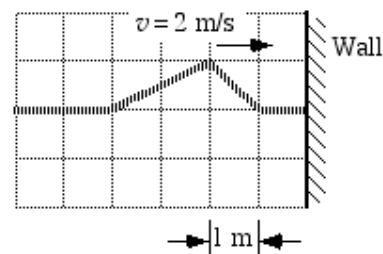
- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

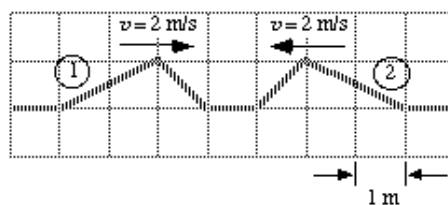
Figure e.

Explain. The i-word. I guess you could say I'm mostly guessing.

END OF RESPONSE



- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. the 2 peaks will collide & combine

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. the pulses move through each other and continue on in the same shape as they appeared in part 1.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

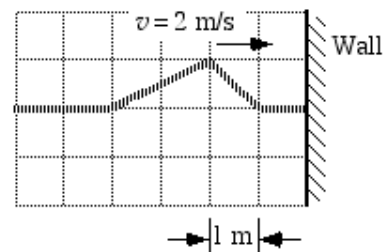
Explain. the pulses move through each other

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

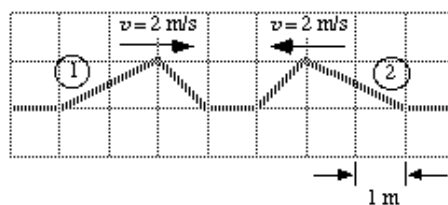
Figure c.

Explain. the pulse hits the wall & recoils inverted from the way it approached the wall



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. since they are moving towards each other, they will build up amplitude.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Choice h. none of the above

Explain. they should have added up to have an amplitude of 2 units

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.

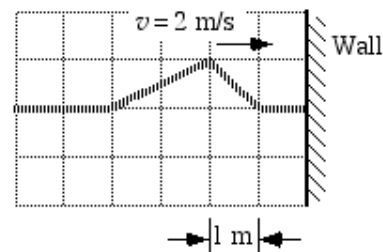
Explain. non are correct

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

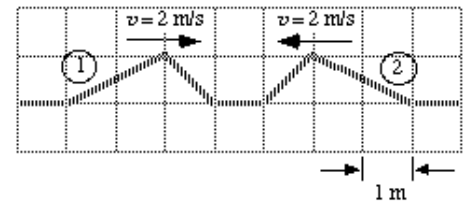
Figure a.

Explain. it will reflect back in the same direction for the amplitude



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. The two waves would add, and their addition would be accurately described by choice A

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. The waves pass through each other and are unaffected by the 'collision.'

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

unanswered

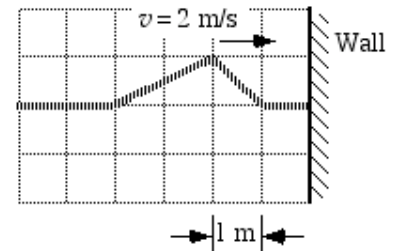
Explain.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

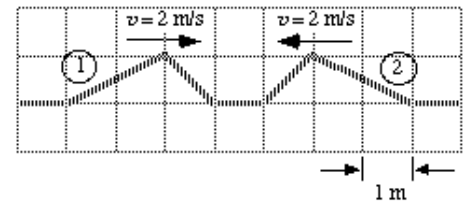
Figure d.

Explain. A mirror image of the wave is reflected, which is what is shown in figure D.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure b.

Explain. It just looks as if the two pulses would move together like so

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure e.

Explain. seems like the two pulses would cancel each other a small amount

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

Explain. It just seems right

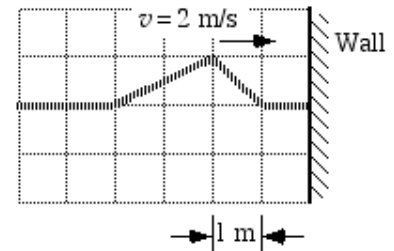
- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

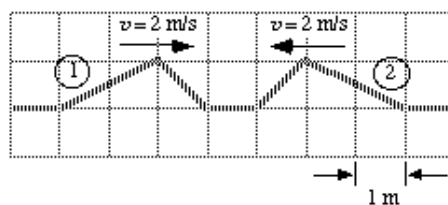
Figure e.

Explain. my intuition?

END OF RESPONSE



- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. first of all you can tell it is asymmetric so its not a straight line. and in its first second it would have just gone 2m/s so rise/ run = 2/1 so it must be a

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. because now you have them going in opposite directions. theres no way it can be negative and it also continues from the previous question so it is a

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

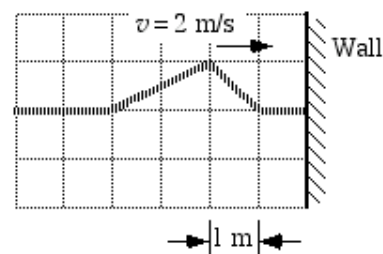
Explain. they go in opposite directions so they cannot cancel.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

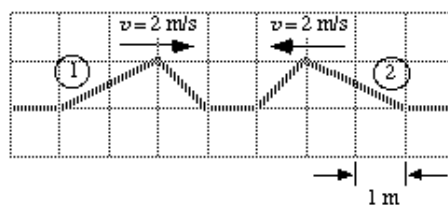
Figure e.

Explain. since energy is conserved it will just be opposite of what it was.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. Basically, I viewed each wave as travelling seperately and together they form a wave with a greater height due to constructive interference.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. I thought that after passing through the meeting point, the two waves would retain their previous shapes and continue their movement as before interaction.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

unanswered

Explain. Pulse one and pulse two change places (left and right) during questions 8 and 9. Also, I did not think that they cancelled because they both have amplitude in the same direction above the horizontal axis.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

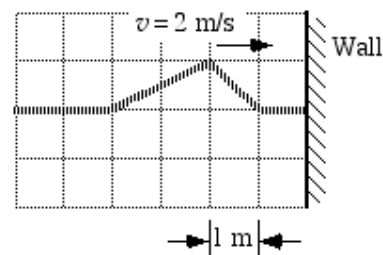
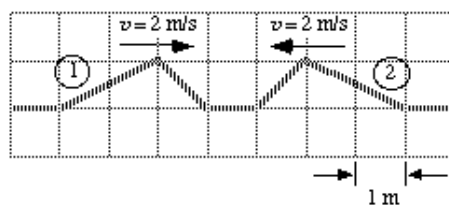


Figure e.

Explain. The spring bounces off the wall with the shorter bend always leading the movement. Since the shorter bend is the first to hit the wall it must also be the first to turn around.

END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. I think that the pulses will be additive.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. I think that the pulses will pass through one another.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

unanswered

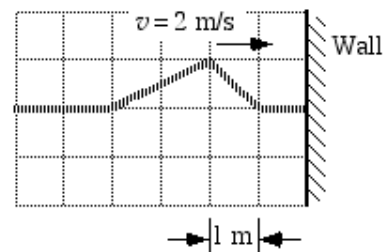
Explain. In one case pulse one is on the left in the other its on the right.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

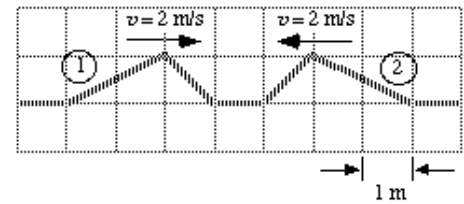
Figure e.

Explain. The pulse bounces off the wall.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure c.

Explain. I don't entirely understand what is being asked, but I picked C because it looks the most logical.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure e.

Explain. Hmm, I'm not entirely sure. Choice e looks logical.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.

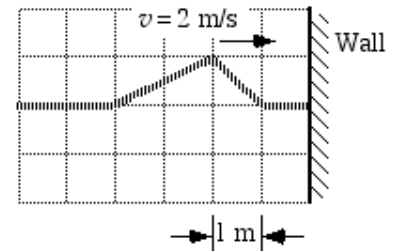
Explain. ?

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

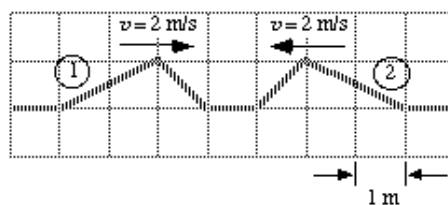
Choice f. none of the above

Explain. No idea.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. they add together

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. they go back to normal

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

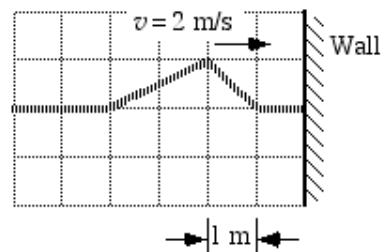
Explain. the wave pass through each other

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

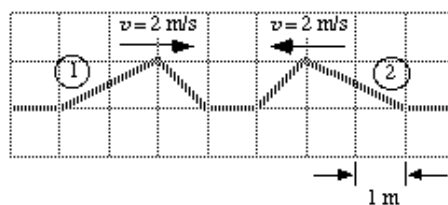
Figure d.

Explain. bounce off the wall



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. It was pretty much a wild guess.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. Again, another wild guess

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

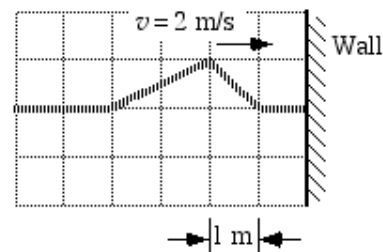
Explain. It looked like a good guess

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

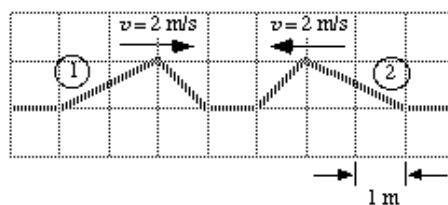
Figure e.

Explain. Guessing is this the theme here, i'll stick with it



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. By determining how much area each pulse holds.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. I guessed.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

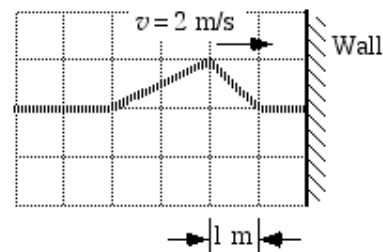
Explain. I'm not quite sure.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

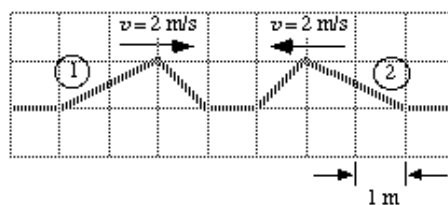
Figure c.

Explain. I'm not quite sure.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure e.

Explain. The two shapes will be added together vertically when they are centered about the same point.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. The wave will just travel along as it was before.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

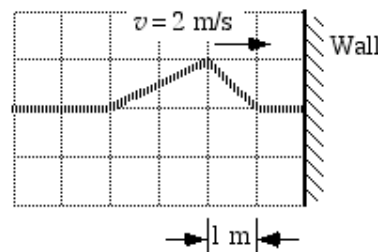
Explain. Pulse 1 continues to move to the left and pulse 2 continues to move to the right.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

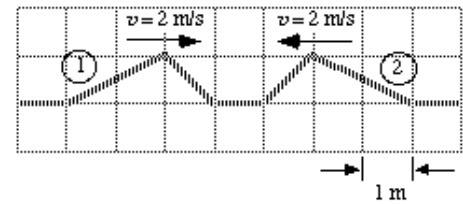
Figure d.

Explain. It will be rotated 180 degrees when it hits the wall.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. The waves will add to each other

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. The waves continue just as they had before

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

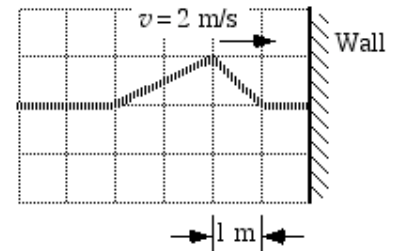
Explain. The energy is the pulse and it continues to move in the same direction as it had before

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

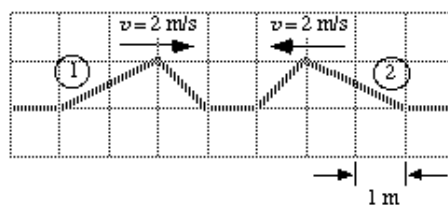
Figure d.

Explain. As the pulse continues it will flip because it travels along the wall



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. The highest points of the two waves are at the points shown in fig. d. In between them the line slopes inward.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. The waves will pass by each other and look as shown in fig c.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

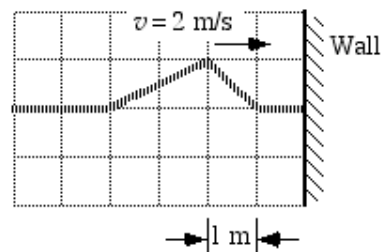
Explain. The pulses will pass by each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

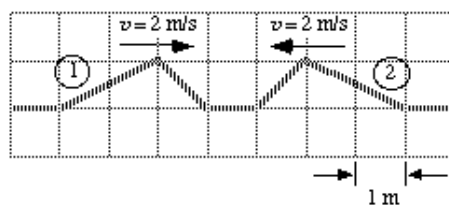
Figure d.

Explain. The pulse will bounce off the wall but will be reflected.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. You just moving everything over 2 meters because that is where everything is after one second and add the amplitudes.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. For the same reasoning as the previous question, you move everything over 4 meters because that is how far everything travels in 2 seconds and add the amplitudes together.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

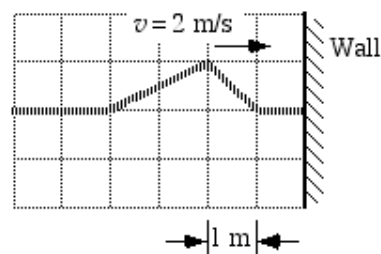
Explain. Everything moves over in the direction that it is moving.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

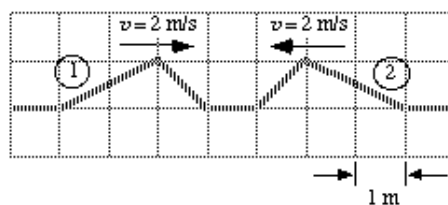
Figure d.

Explain. The wall will cause the wave to go below, and the shape will look the same except going in the other direction.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. the figures add to each other

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. They constructively interfere with each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

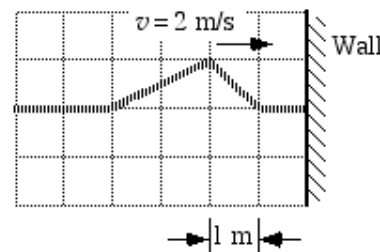
Explain. they are this way because they pass each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

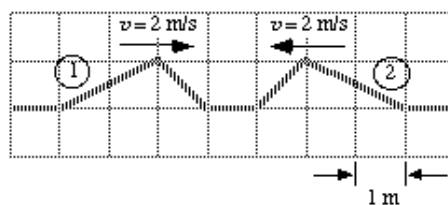
Figure e.

Explain. the answer is either d or e. I guessed d.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. Waves will combine and pass each other when they cross the same area.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. Waves will continue on their own path.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

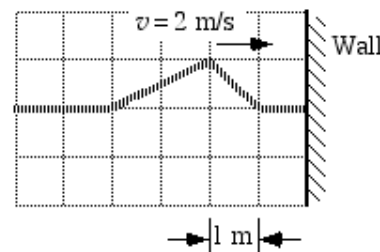
Explain. The waves continue on their own path.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

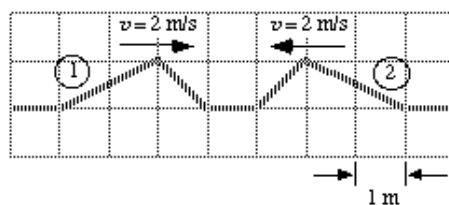
Figure d.

Explain. When it hits a wall, it reverses.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. two waves will add to make it slightly larger in amplitude and they will have crossed over each other so two peaks will be seen.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. it makes sense.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

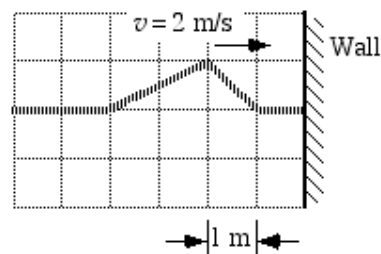
Explain. a guess

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

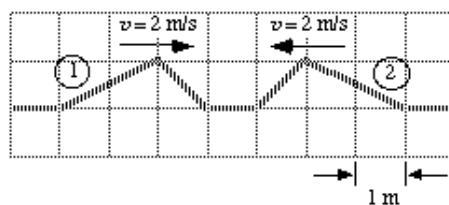
Figure e.

Explain. it makes sense



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. by making each pulse move in its indicated direction and keeping its original shape, this is what the picture would look like

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. the pulses will keep their shape and just move 'through' each other

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

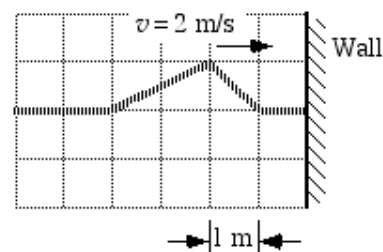
Explain. the pulses are not symmetrical so one can distinguish which pulse is which by the position of the peak and they would have both travelled in their own directions so they would be on opposite sides of each other now

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

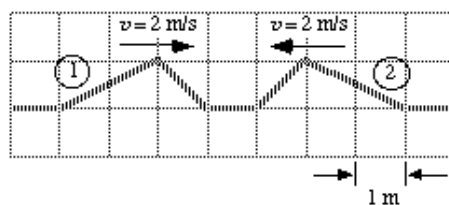
Figure e.

Explain. when the pulse hits the wall, it will be deflected in a manner equal and opposite to how it came in, picture e.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure b.

Explain. guess coming toward each other.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. same reasoning as above.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

It is impossible to distinguish the two pulses from one another.

Explain. i don't know how to answer this one.

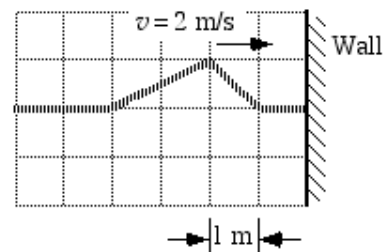
- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

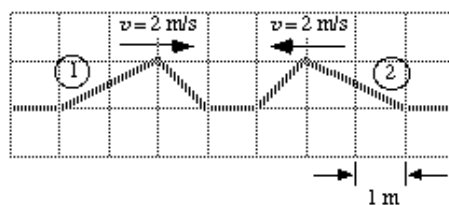
Figure b.

Explain. both pulses will be next to each other and moving in opposite directions.

END OF RESPONSE



- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. They mix. Amplitudes ass up.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. they passed eachother

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

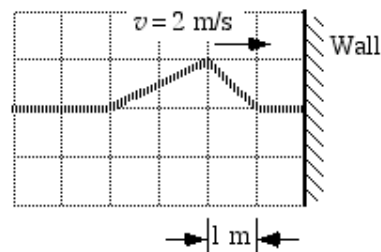
Explain. They pass eachother

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

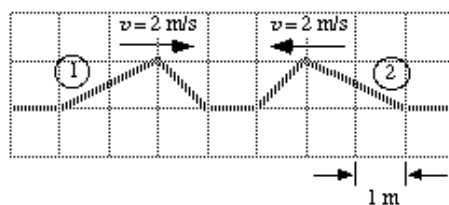
Figure a.

Explain. Just a guess



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. I think that it is a combination of both pulses.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. I think that this is a combination of two pulses after two seconds.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

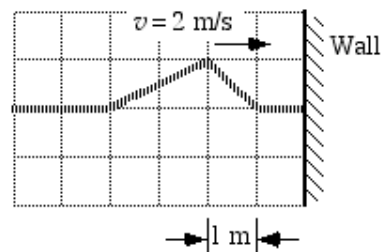
Explain. I think that the pulses will pass right through each other and combine at certain points.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

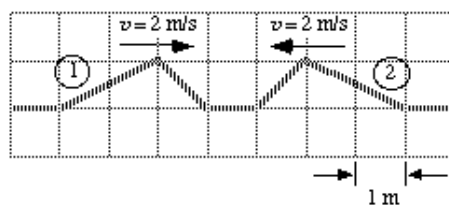
Figure e.

Explain. I think that the pulse will continue as it was except for in an opposite direction now.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure e.

Explain. By 'adding' the shapes as both occupy an area in the center 3 meters.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. Each has moved 4 meters, so they've passed each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

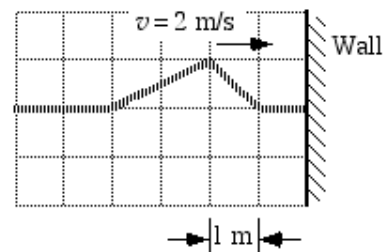
Explain. the pulses are passing each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

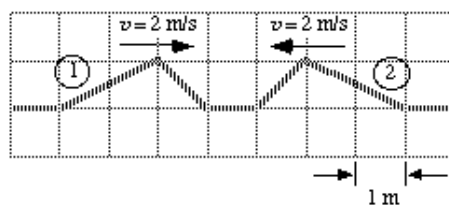
Figure d.

Explain. It will reflect on the opposite side (with the leading edge still first).



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second after the snapshot above was taken**

Figure d.

Explain. Waves add, so I added the two lines at each point and got a picture that looked like diagram d.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds after the snapshot above was taken**.

Figure c.

Explain. When the waves have passed each other, they will continue on as they were at time zero.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

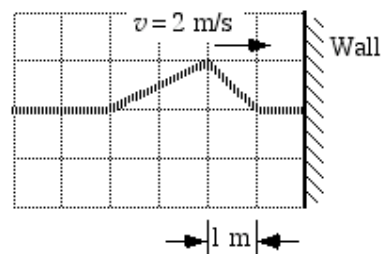
Explain. The pulses passed each other, so as they continue from time zero, pulse one goes from the left to the right, and pulse two goes from the right to the left.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds after the snapshot above was taken**.

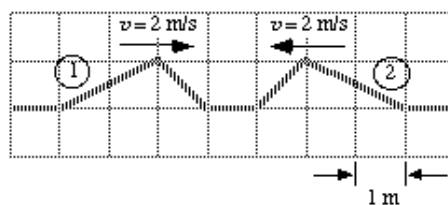
Figure d.

Explain. When pulses encounter a barrier, they reverse, which is what you see in diagram d.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. The two pulses are in phase and so will add together in such a manner as depicted in image d after one second

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. after two seconds, the two pulses will have passed through each other as is depicted in image c.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

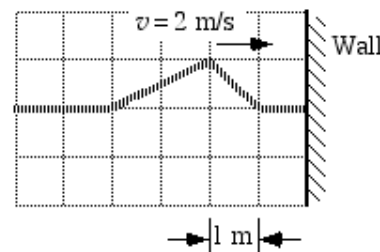
Explain. after two seconds, the pulses have passed through each other and returned to their original shapes and sizes.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

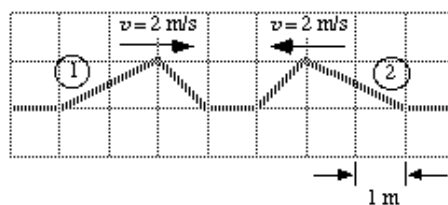
Figure d.

Explain. the wall will reflect the pulse in an inverted fashion, but in the same shape and size, so image d is the correct choice.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. the coliding has already happened and now they are moving on there ways again

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. they are continuing on there ways not having been acted on by an outside force

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

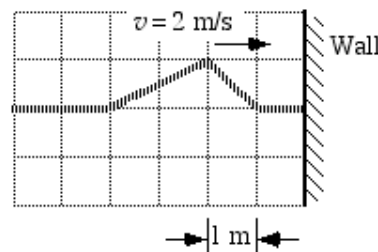
Explain. the pulses do not affect eachother after the collision.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

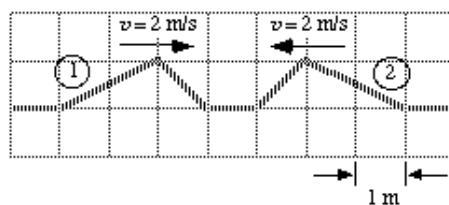
Figure d.

Explain. the pulse hits the wall and then rebounds in the opposite direction with the same speed.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. same peak height in 1 second itme

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure a.

Explain. peaks move 2 m/s, so the peaks are 2 meters from question 7

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

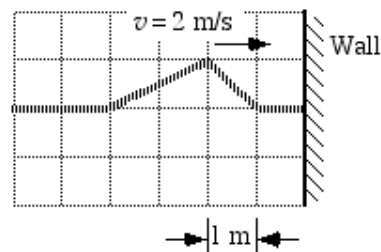
Explain. that is the direction of their movement, unless the pulses bounce off each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

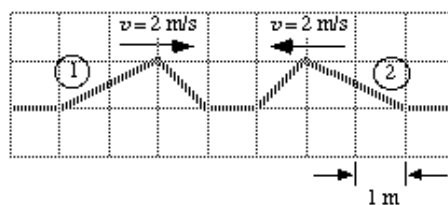
Figure e.

Explain. the pulse moved a total distance of 6 meters in 3 seconds, but bounces off the wall after 2 meters. So the pulse is 4 meters from the wall, or at position e.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure e.

Explain. each wave has moved 2 meters in one second thus this would seem the logical answer.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. the waves are of equal speed and magnitude therefore they should move through unobstructed.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

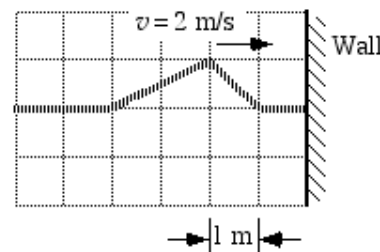
Explain.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

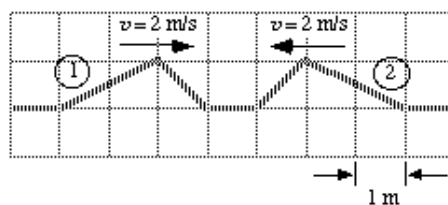
Figure b.

Explain. the wave will move toward the wall and then when it hits the wall it dissipates.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. After one second, the waves interfere with each other, so we have to add their amplitudes to get (d).

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. After two seconds, the waves no longer interfere with each other, so the result is just the two individual waves, displaced by the appropriate amount.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

unanswered

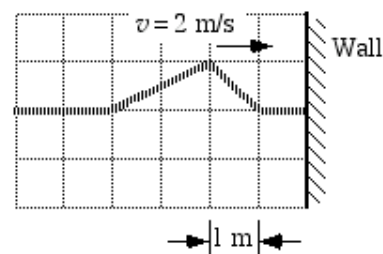
Explain. None of the answers captured any aspect of the pulses that was true in the original state, after 1 second and after 2 seconds.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

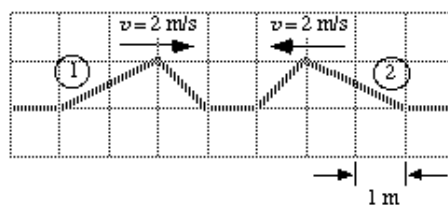
Figure d.

Explain. The wave reflects off the wall, ending the other way up, and every part of it moving $2 * 3 = 6$ meters.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. Really, I'm not quite sure. All I know is that the peaks have moved 2m, and they should not go any higher, but they hit eachother, so this could make the peak higher. I don't know what will happen after the peaks hit.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. Based on my knowlege, that there are no external forces or anything working on the system, I would say the peaks just pass eachother, not effecting the other's period, amplitude, etc.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

unanswered

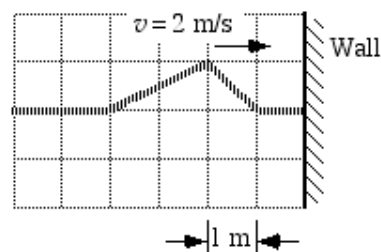
Explain. I suppose it might be possible the pulses bounce off eachother...but I don't see why they would.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

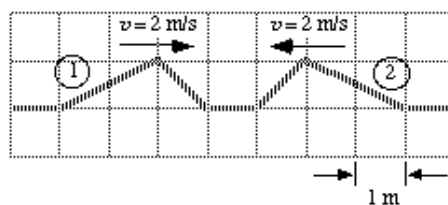
Figure e.

Explain. I tried to solve this thinking of ripples in a bathtub...when you push the water in one direction, the waves come back in little ripples. I belive the pulse just changes direction.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. The total area must remain the same and the height of the peak should be higher because the two pulses are added.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. The two pulses cancel each other out.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

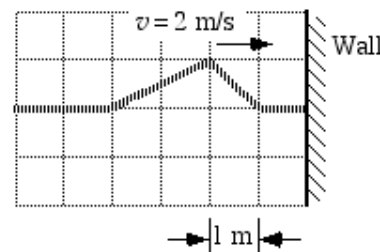
Explain. They are equal and opposite.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

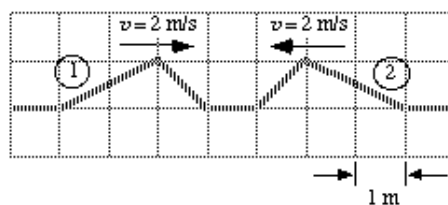
Figure e.

Explain. The impulse just bounces off the wall like a ball.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure b.

Explain. Because they combine together.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. Because they separate again.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

unanswered

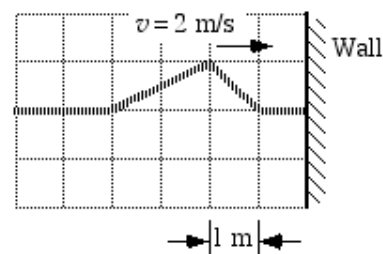
Explain.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

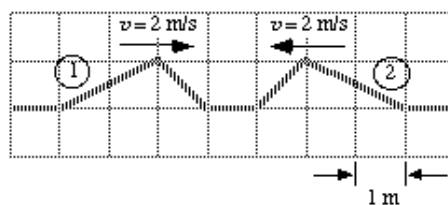
Figure c.

Explain. Because it's sinusoidal.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. They add together

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. they keep their own shape.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

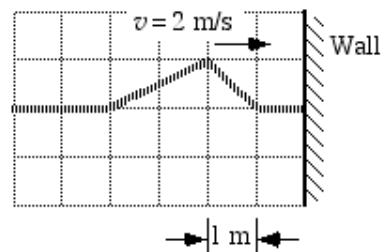
Explain. they pass by each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

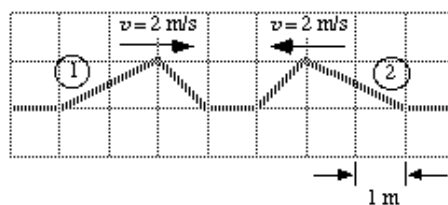
Figure d.

Explain. A pulse equal but opposite occurs.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second** after the snapshot above was taken

Figure d.

Explain. The pulses will meet after a second and they will add magnitudes to create the extrema shown.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds** after the snapshot above was taken.

Figure c.

Explain. C shows the pulses at 2 seconds because they will have already passed each other and now they will be moving away from each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

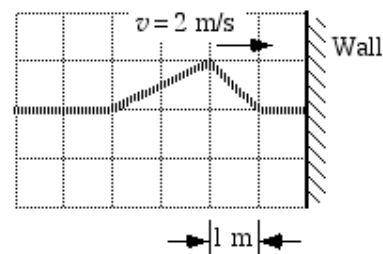
Explain. They have passed each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds** after the snapshot above was taken.

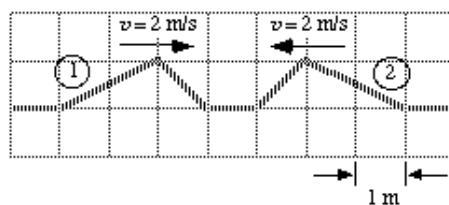
Figure d.

Explain. the wall returns the pulse in the opposite direction.



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. The spring has to have a bulge in it/ a wave in it, because it produces two opposite waves

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure b.

Explain. Because the bulge in the spring will move out and produce two waves

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

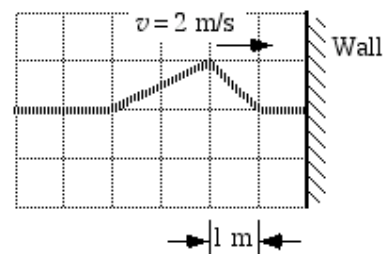
Explain. Because as the spring goes out, it produces a wave in one direction, and then as it comes back a wave in the other direction.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

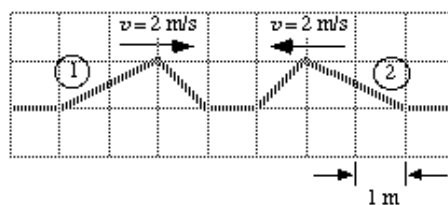
Figure b.

Explain. Because the spring is connected to the wall, it will keep it steady



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure d.

Explain. the springs peak positions will be at the implicated points

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. superposition

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

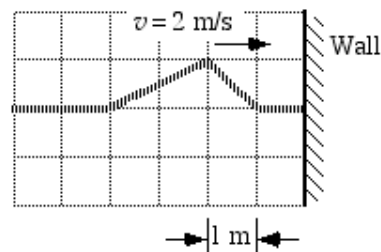
Explain. not sure

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

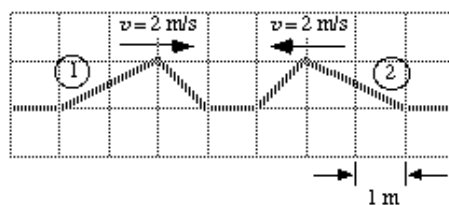
Figure c.

Explain. not sure



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. After 1 sec, both pulse exert a force on each other. By vector addition, the resultant force is similar to fig. c

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure f.

Explain. Newton's 3rd Law

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

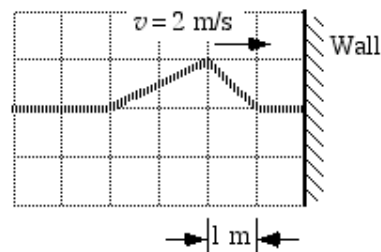
Explain. Equal and opposite forces will cancel each other

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

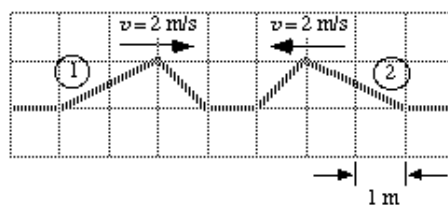
Figure c.

Explain. Newton's 3rd Law



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure a.

Explain. Since it is moving at 2m/s we know that in one second it moved 2 m.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. Once the pulses hit they cancel out since they are they same.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

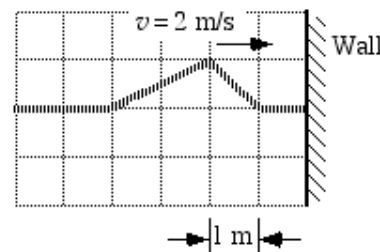
Explain. When they hit they cancel since they are the same.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

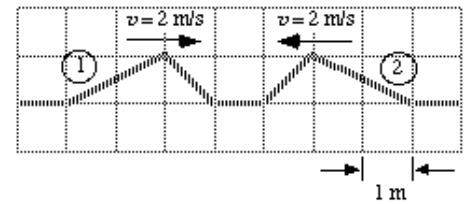
Figure c.

Explain. Knowing how the shape of the graph is of the spring and how far it moves within each second can tell which graph would represent it 3 seconds later.



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Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure c.

Explain. guessing and looking at the picture

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure c.

Explain. guessing

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 1 is on the right and Pulse 2 is on the left.

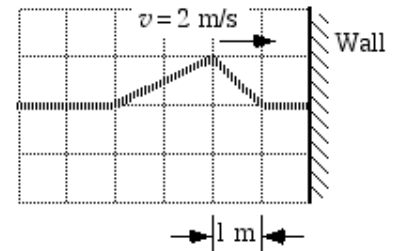
Explain. guessing

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

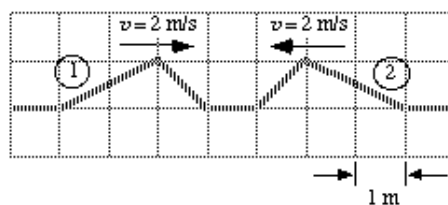
Figure d.

Explain. guessing



END OF RESPONSE

- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one second after the snapshot above was taken**

Figure d.

Explain. Since the waves are mirror images of each other, they should add together to form one large mountain with a crater at the top.

Q2: Choose the figure that most accurately represents the shape of the spring **two seconds after the snapshot above was taken**.

Figure d.

Explain. They should come out looking the same as they started but inverted.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

Pulse 2 is on the right and Pulse 1 is on the left.

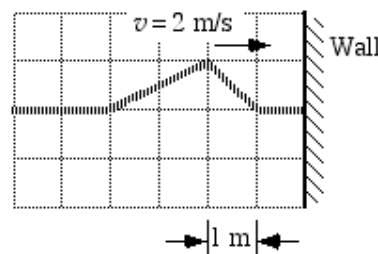
Explain. The pulses went through each other.

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three seconds after the snapshot above was taken**.

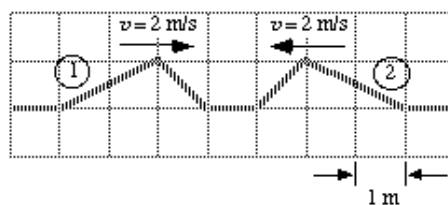
Figure d.

Explain. Figure d because it comes out looking like it goes in; however, it is now reversed.



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- A. Shown at right is a snapshot of a spring with two asymmetric pulses (labeled 1 and 2) traveling along it. (The size and shape of the pulses are exaggerated for clarity.) The pulses are moving toward each other, and each pulse moves with a speed of 2 m/s.



Q1: Choose the figure that most accurately represents the shape of the spring **one** second after the snapshot above was taken

Figure e.

Explain. Superposition of waves.

Q2: Choose the figure that most accurately represents the shape of the spring **two** seconds after the snapshot above was taken.

Figure g.

Explain. Assumption that the pulses offset each other.

Q3: Choose the statement below that most accurately describes your responses to the two previous questions. If none of the statements describe your responses, leave the question unanswered.

The pulses cancel.

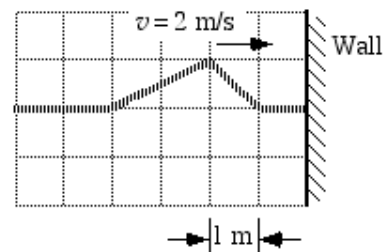
Explain. Superposition?

- B. Suppose that one end of the spring is fastened to a wall so that it cannot move, as shown at right. An asymmetric pulse moves toward the fixed end of the spring at a speed of 2 m/s.

Q4 Choose the figure that most accurately represents the shape of the spring **three** seconds after the snapshot above was taken.

Figure d.

Explain. Because the wall acts as a reflector of the pulse, the pulse will travel the same way as it is without hitting wall, only this time the position is reflected like on a mirror.



END OF RESPONSE