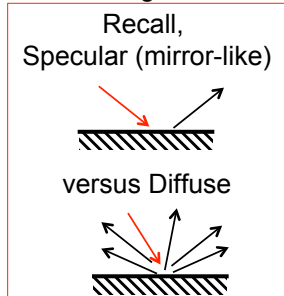
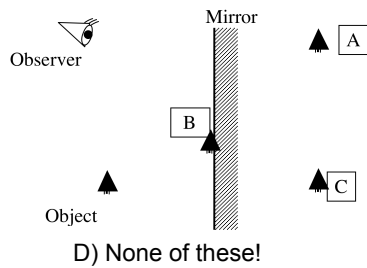


If I shine my laser pointer at the white screen, is the reflected light primarily
A) Specular
B) Diffuse



Which point best indicates where the observer would *perceive* the image?

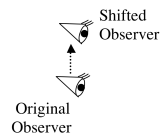
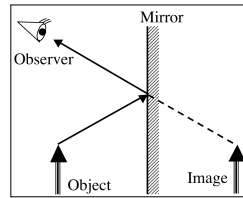


Which is true?

A) There is only 1 ray of light from object to observer (I drew it!)

B) Only the tip of the object emits light. That light goes out in *all* directions. I drew 1 ray to keep the picture simple.

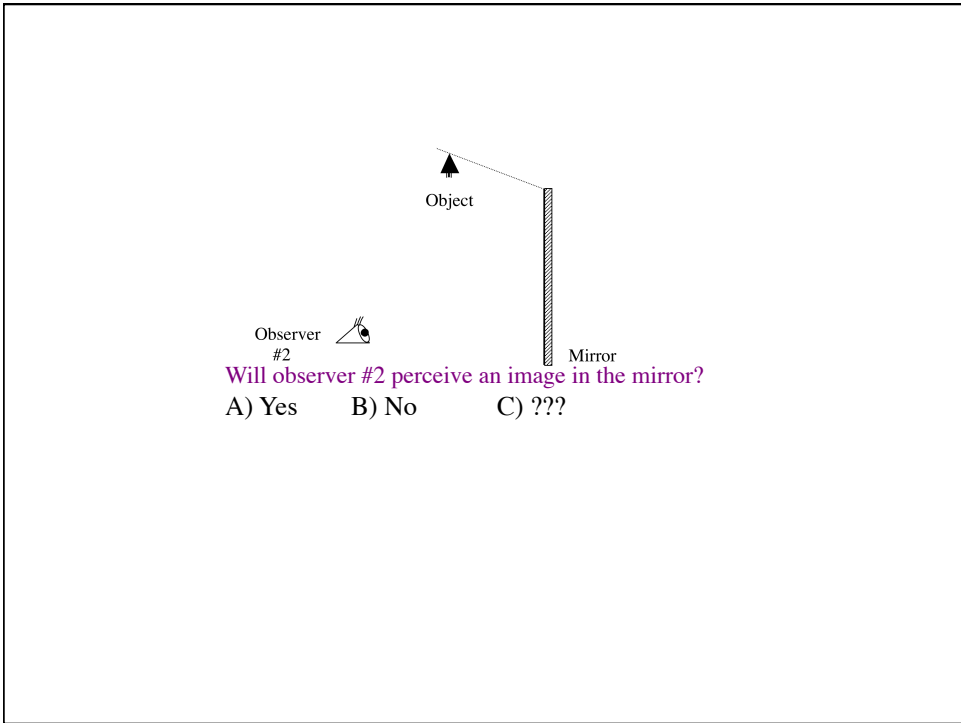
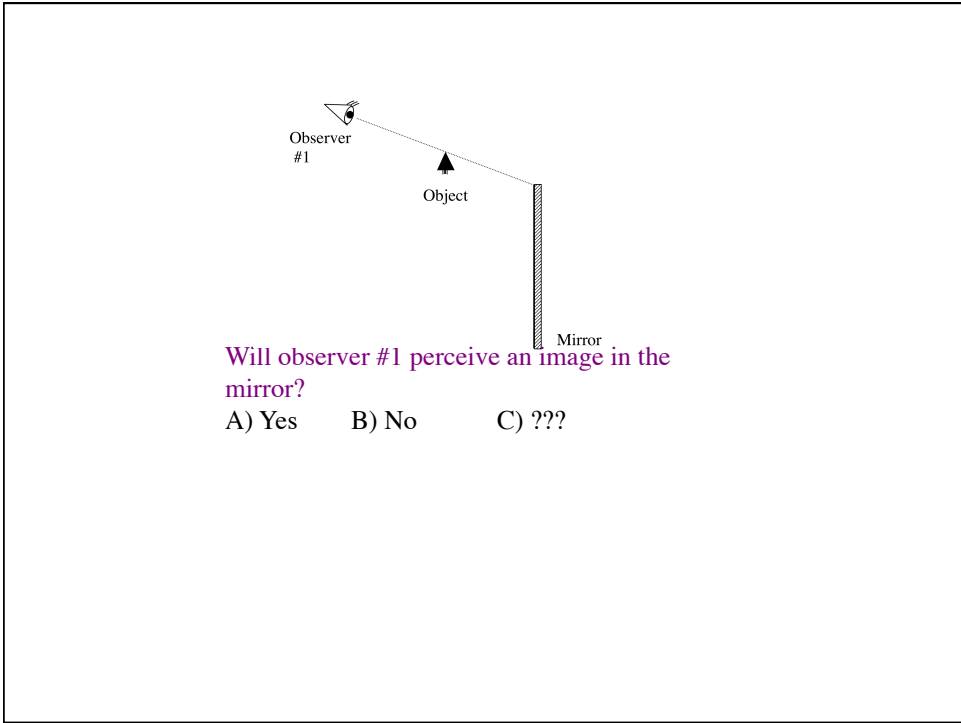
C) *All* points on the object emit light, in *all* directions. I drew 1 ray to keep it simple.

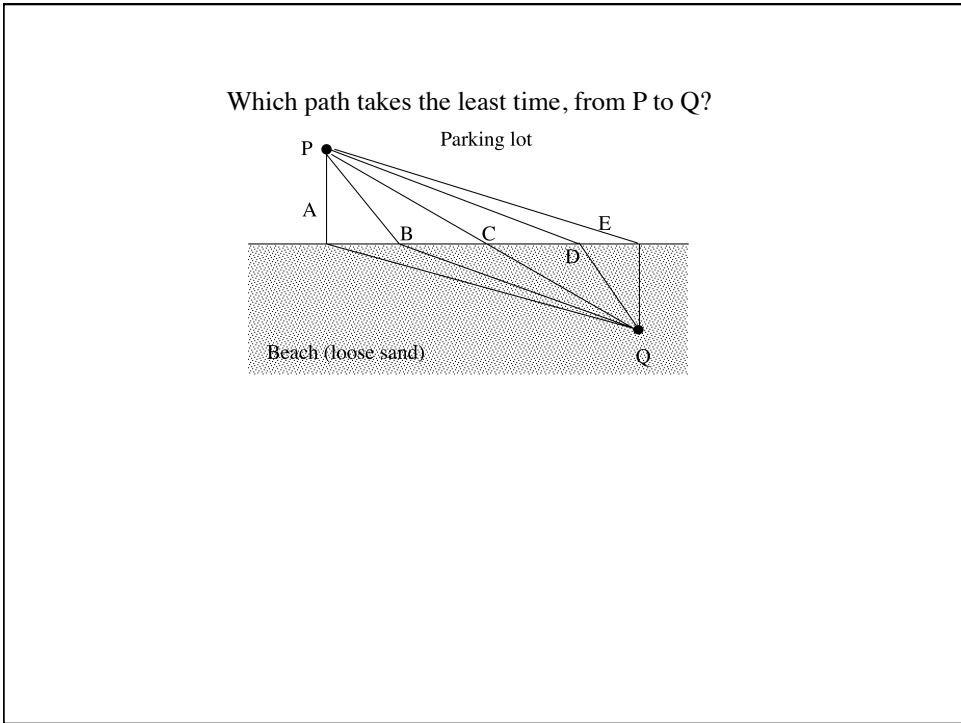
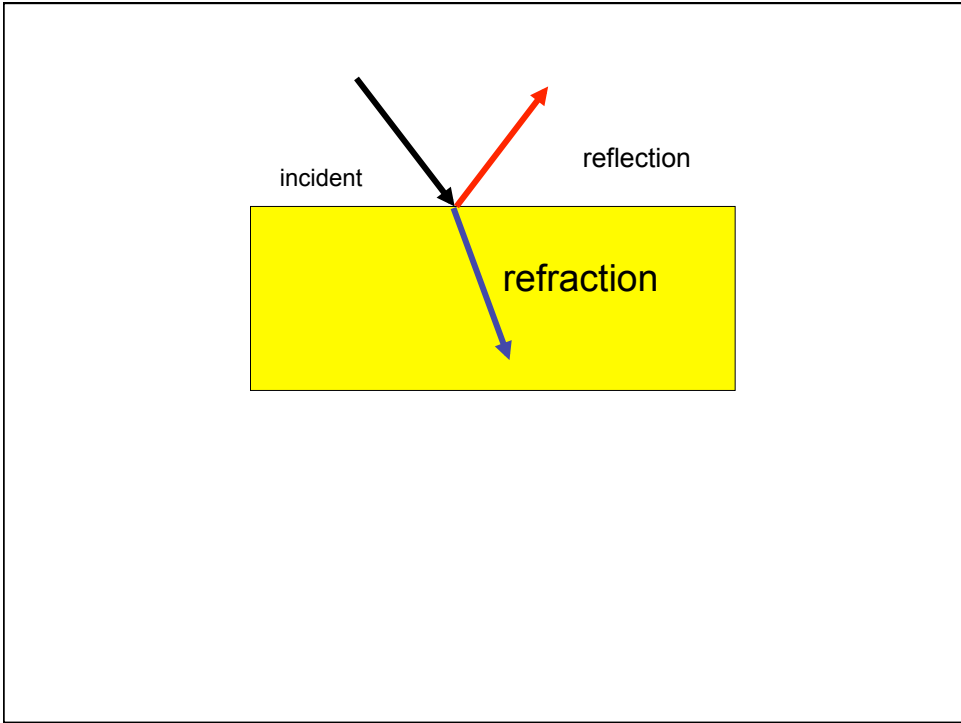


Which is true when the observer shifts a bit?

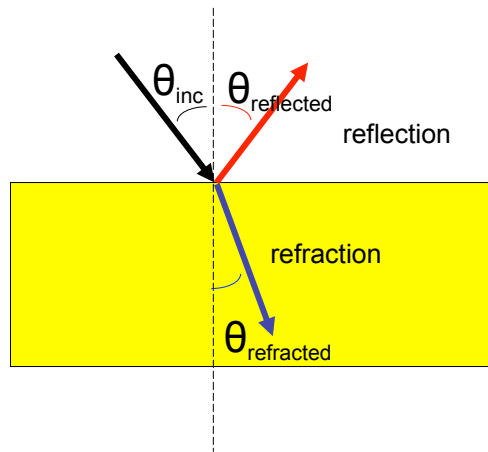
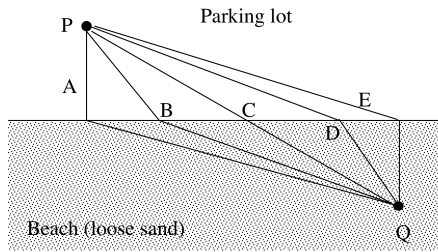
A) Perceived image position shifts a little

B) Perceived image remains in one place



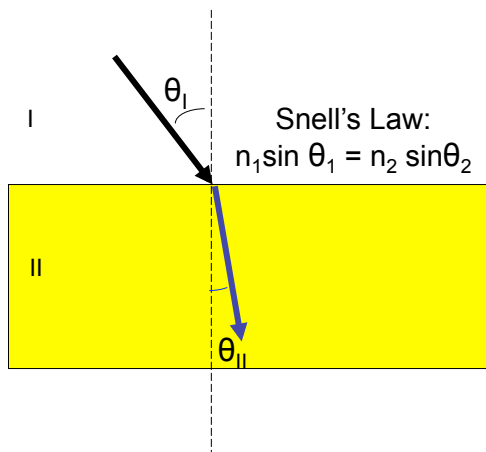


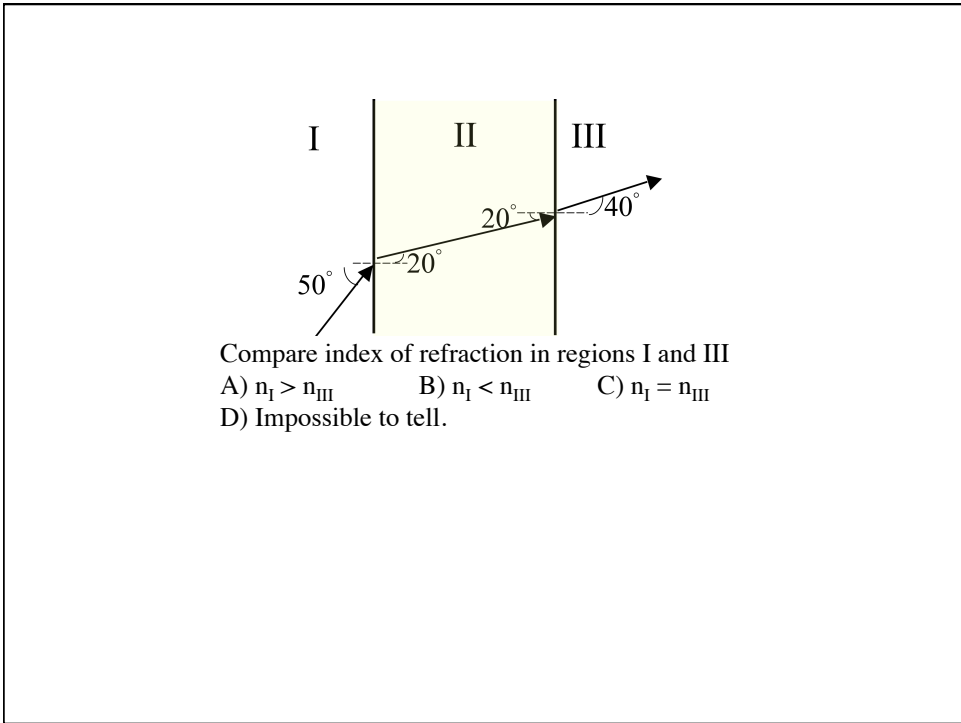
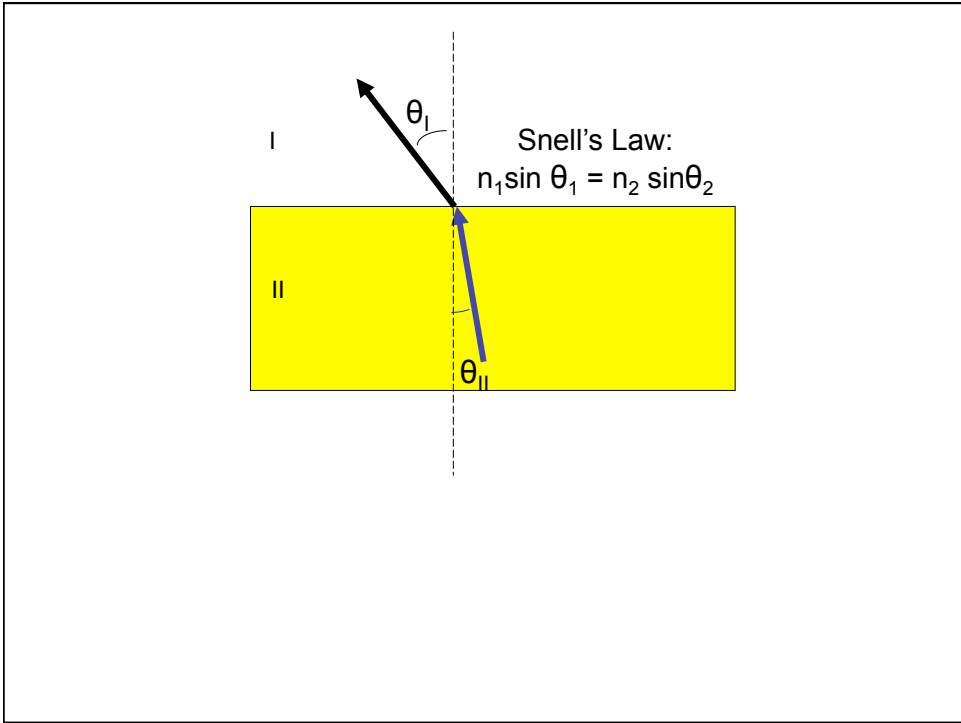
Which path takes the least time, from Q to P?



Index of refraction:
 $n = c/(\text{speed in medium})$

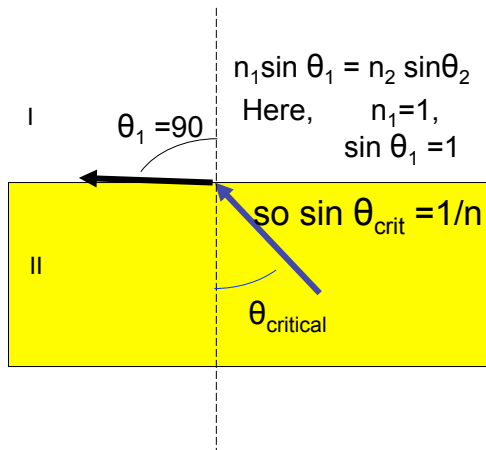
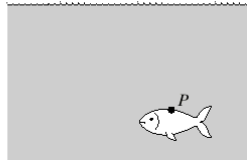
air: $n=1.0003$
water: $n=1.33$
glass: $n=1.4-1.6$
diamond: $n=2.4$





An observer at O sees the fish at...
A) a greater B) the same C) a smaller
... depth, than it really is.

O



I Total Internal Reflection!

