

Question:

White light rays go through a prism which has a lower index of refraction than the surrounding material. What will happen?

- (A) Rays of different colors would intersect on the other side of the prism
- (B) A rainbow of color will form on the other side with red on top and violet on the bottom
- (C) *A rainbow of colors will form on the other side with violet on top and red on the bottom*
- (D) Rays of light would converge and make up white light

Question:

A concave mirror of focal length f forms an image of the moon. Where is the image located?

- (A) Almost exactly a distance behind the mirror
- (B) *Almost exactly a distance f in front of the mirror*
- (C) At a distance f behind the mirror equal to the distance of the moon in front of the mirror
- (D) At the mirror's surface

Question:

You are looking in a mirror that only makes virtual images, which one of the following is true?

- (A) Your image is upright and smaller
- (B) Your image is inverted and smaller
- (C) *Your image is upright and smaller*
- (D) Your image is inverted and smaller
- (E) It depends on whether $(p < f)$ or $(p > f)$

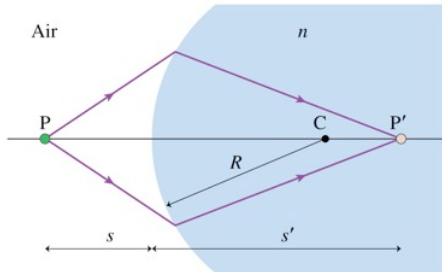
Question:

You're at Sea World and Shamu is looking at you from the tank of water. He's hungry and is going to jump out eat you. What is he going to find out after he's out of water?

- (A) *You are closer than what he thought*
- (B) You are further than what he thought
- (C) You are the same distance he thought and you are delicious
- (D) Shamu is not good at physics

Question:

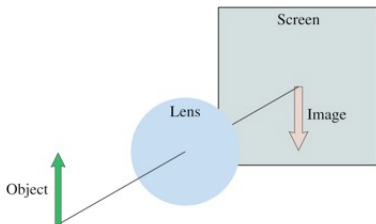
Which of these actions will move the image point P' further from the boundary?



- (A) Decrease the radius of curvature R
- (B) Increase the index of refraction n
- (C) *Increase the radius of curvature R*
- (D) Increase the object distance s

Question:

A lens produces a sharply-focused, inverted image on a screen. What will you see on the screen if the lens is removed?



- (A) The image will be inverted and blurry
- (B) The image will be as it was, but much dimmer
- (C) *There will be no image at all*
- (D) The image will be right-side-up and sharp
- (E) The image will be right-side-up and blurry