

Warm Up Question 1

A tiny speck of dust is held between the focal point and the center of a concave lens. Someone states that, "The image (of the speck of dust) formed by a lens is located at the focal point of the lens, regardless of the distance between the speck and lens." Is this statement true or not? Explain your answer (you can refer to diagrams in the text if necessary).

1. Yes, although the focal point will adjust depending on the particle's location.
2. No. If the speck is close enough to the lens, then the image will be infinitely distant.
3. No. The image location depends on the location of the speck of dust.

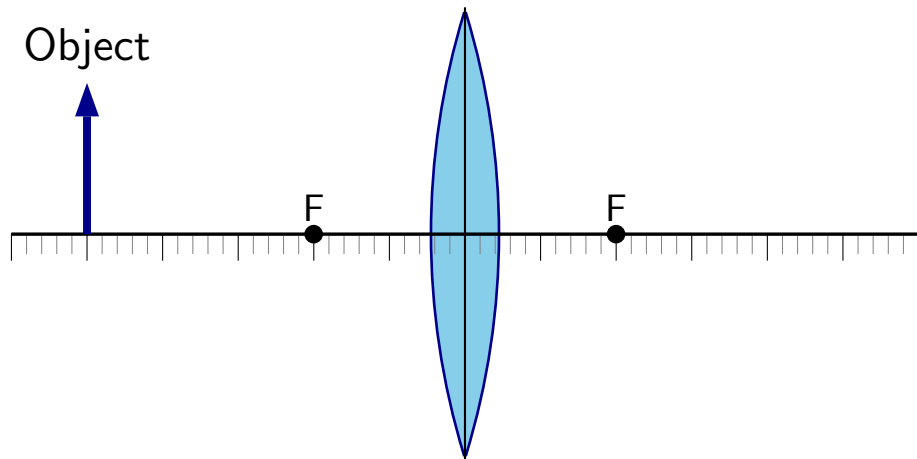
Warm Up Question 2

Two identical objects are placed at the same distance from convex lenses (labeled A and B) and each is between the focal point and the lens. Lens A has a larger focal length than lens B. How does the height of the image produced by lens A compare (larger, smaller, same) to that produced by lens B? Explain your answer.

1. Smaller (for A). Ray tracing says so.
2. Larger (for A). Large focal length means larger image.
3. Same. It's the same object.

Question 1

An object is placed to the left of a convex lens and beyond the focal point as illustrated.



As the object is shifted closer toward the left focal point, which of the following is true?

1. The magnification stays constant.
2. The magnification decreases.
3. The magnification increases.