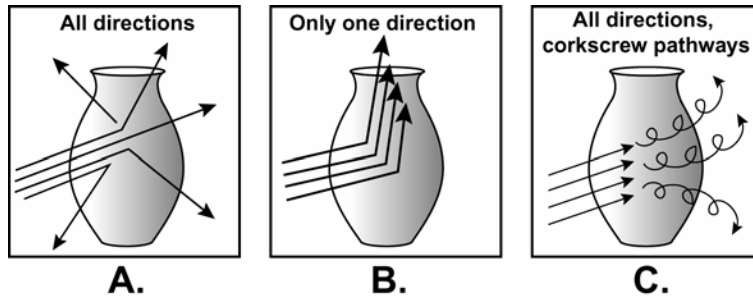


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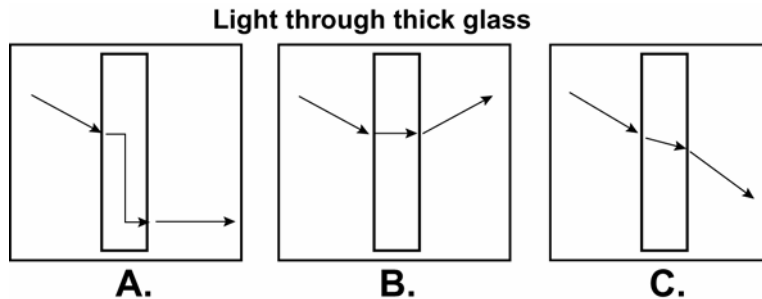
4.2 Ray Diagrams

This skill sheet gives you some practice making ray diagrams. A ray diagram helps you determine where an image produced by a lens will form and shows whether the image is upside down or right side up.

1. Of the diagrams below, which one correctly illustrates how light rays come off an object? Explain your answer.

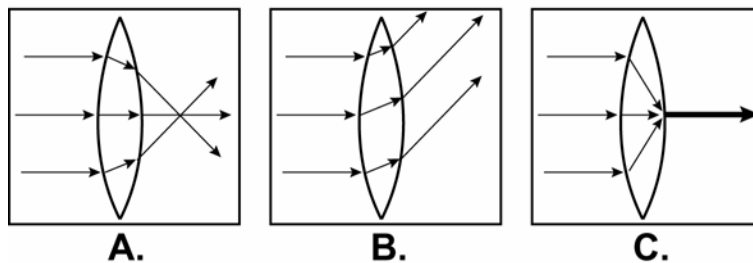


2. Of the diagrams below, which one correctly illustrates how a light ray enters and exits a piece of thick glass? Explain your answer.



In your own words, explain what happens to light as it enters glass from the air. Why does this happen? Use the term *refraction* in your answer.

3. Of the diagrams below, which one correctly illustrates how parallel light rays enter and exit a converging lens? Explain your answer.



4. Draw a diagram of a converging lens that has a focal length of 10 centimeters. In your diagram, show three parallel lines entering the lens and exiting the lens. Show the light rays passing through the focal point of the lens. Be detailed in your diagram and provide labels.