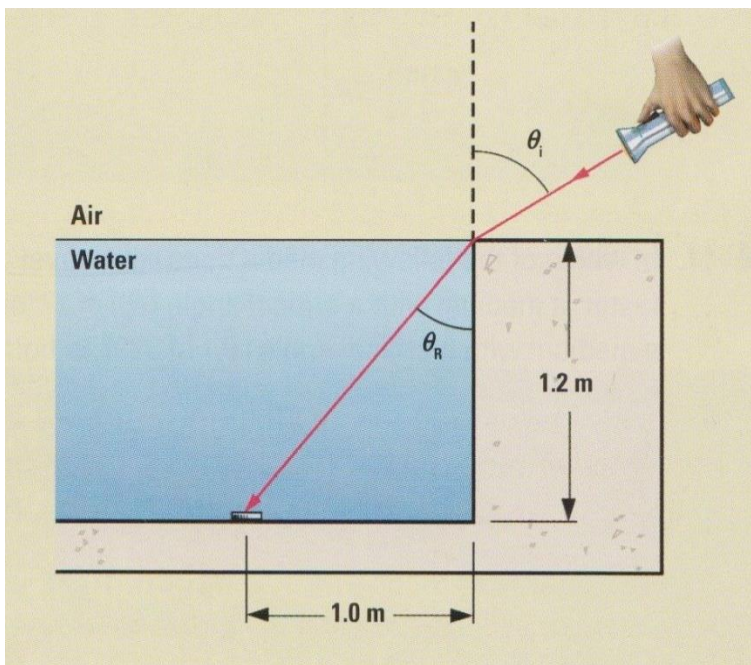


Physics Test Ch 3 & 4

1. The index of refraction in glass of green light is 1.54 and 1.52 for red light. What are the speeds of green light and red light in glass?
2. In which of the following media does light travel faster: medium A with a critical angle (θ_c) of 25.0° or a medium B with a critical angle (θ_c) of 29.0° ? In both cases, the second medium is air. What are the two speeds of light in medium A and medium B?
3. Light travels in water at three-quarters of its speed in air. If the angle of incidence (θ_i) in air is 10° , what will the angle of refraction be in water?
4. What angle must the flashlight form with the pool wall in order for the light beam to shine on the coin?



5. A lens has a magnification (M) of 4.00. If its focal length (f) is 40.0 cm, determine:
 - a. the object distance
 - b. the image distance
 - c. the type of lens.
 - d. How far in the image from the object?