

Section

15-1

HOLT PHYSICS

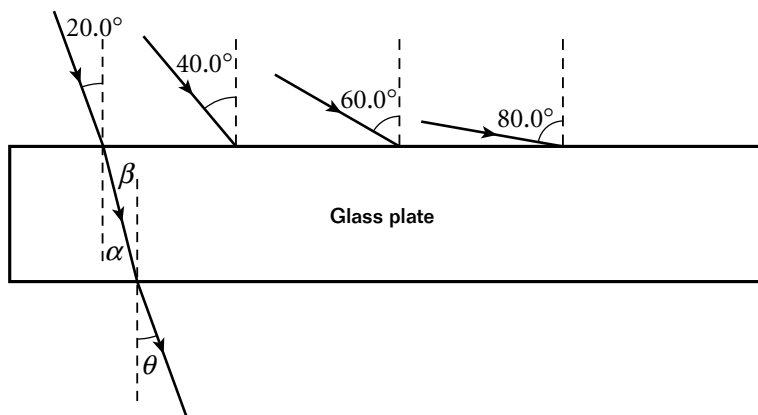
Concept Review

Refraction

1. The speed of light in air is 3.00×10^8 m/s.
 - a. How does the index of refraction relate to the speed of light in a medium?

 - b. The index of refraction of water is 1.33. What is the speed of light in water?

2. A light ray traveling in air strikes a glass plate with a refractive index of 1.52 at a 20.0° angle from the normal. After refraction, going in and out of the glass, the exiting ray forms an angle θ with the normal to the surface on the other side.



- a. Find α , the angle of refraction from air to glass. _____
- b. The plate sides are parallel. Find β , the angle of incidence from glass to air, and θ , the angle of refraction.

- c. Repeat when the angle of incidence from air is 40° , 60° , and 80° .

- d. Sketch the results on the diagram above.

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