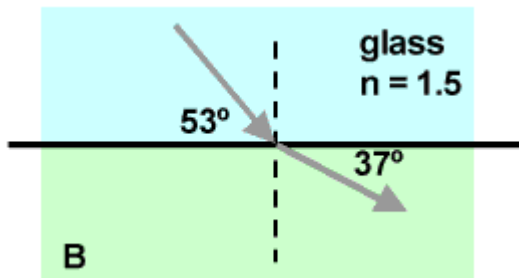


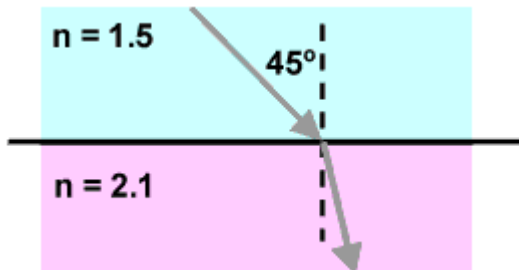
## Snell's Law Problems

(Answer with full solutions on the back of this page)

1. A light ray travels from air ( $n = 1.0$ ) into water ( $n = 1.33$ ). The angle of incidence is  $34^\circ$ . What is the angle of refraction?
2. A light ray travels from water into air. If the angle of refraction is  $56^\circ$ , what is the angle of incidence?
3. Calculate the index of refraction for medium B.



4. Calculate the angle of refraction in the lower medium.



5. What is the index of refraction of a medium if the angle of incidence in air is  $40^\circ$  and the angle of refraction is  $29^\circ$ ?
6. What is the angle of incidence for a light ray traveling from water into flint glass ( $n=1.70$ ), if the angle of refraction is  $30^\circ$ ?
7. A ray of light in air strikes a block of quartz at an angle of incidence of  $30^\circ$ . The angle of refraction is  $20^\circ$ . What is the index of refraction of the quartz?