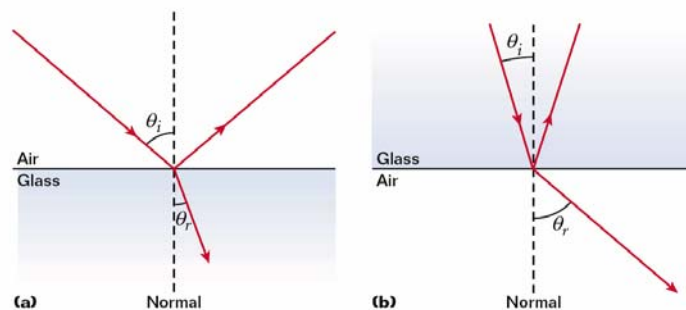


Refraction and Snell's Law Lecture Handout

Directions: Complete the lecture handout using information obtained from the lesson.

- The bending of light as it travels from one medium to another is called _____
- As a light ray travels from one medium into another medium where its speed is different, the light ray will _____
- The _____ for a substance is the ratio of the speed of light in a vacuum to the speed of light in that substance.
- Index of Refraction formula:

- Snell's Law Formula

**Sample Problem:****Snell's Law**

A light ray of wavelength 589 nm (produced by a sodium lamp) traveling through air strikes a smooth, flat slab of crown glass at an angle of 30.0° to the normal. Find the angle of refraction, θ_r .

Multiple Choice:

1. How is light affected by an increase in the index of refraction?
 - A. Its frequency increases.
 - B. Its frequency decreases.
 - C. Its speed increases.
 - D. Its speed decreases.
2. Light with a vacuum wavelength of 500.0 nm passes into benzene, which has an index of refraction of 1.5. What is the wavelength of the light within the benzene?
 - A. 0.0013 nm
 - B. 0.0030 nm
 - C. 330 nm
 - D. 750 nm