

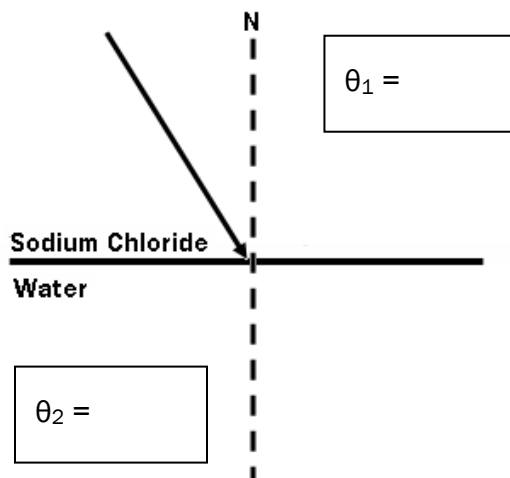
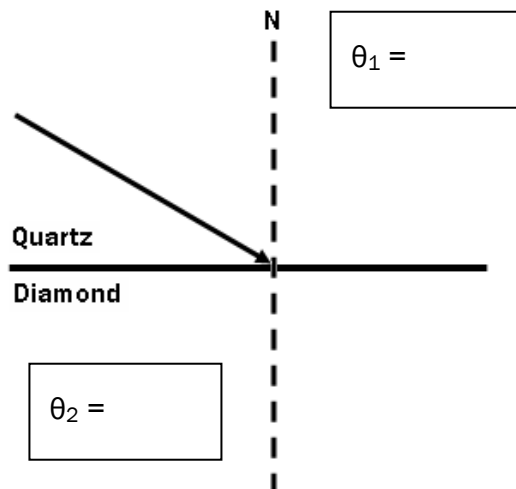
Name _____
Honors Physics
Period _____

Date _____
Reflection/Refraction WS#5
Mrs. Nadworny

Snell's Law

Directions: Read online textbook pages 566 – 567. Complete the following problems.

- For the two refraction problems complete the following work:
 - Use a protractor to measure the incident angle (θ_1). Record on the diagram and in the box provided.
 - Calculate the angle of refraction (θ_2) showing your work in the space next to the diagram. Record the value in the box provided.
 - Use a protractor to draw the refracted ray. Label the refracted angle on the diagram.



2. A ray of light in crown glass exits into air at an angle of 22.5 degrees. Determine the angle at which the light approached the glass-air boundary.

3. Light passing through glycerol with a velocity of 2.04×10^8 m/s enters into a diamond. What would be the speed of the light in the diamond?

4. An x-ray traveling through a vacuum has a wavelength of 3.2×10^{-9} m. As the x-ray passes into a denser medium, the wavelength of the x-ray will decrease to 7.8×10^{-10} m. What will be the speed of the x-ray in the denser medium?

Answers in size order: 14.6, ~31.5, ~32.0, ~37.8, ~60.0, 7.3×10^7 or 7.4×10^7 , 1.24×10^8