**Waves Model – Worksheet 4**

**Snell’s Law**

1. A ray of light traveling from air into crown glass strikes the surface at an angle of 30˚. What will the angle of refraction be?
2. Light travels through an unknown liquid at 2.25 x 108 m/s. What is the index of refraction for the unknown liquid?
3. What is the index of refraction of a medium if the angle of incidence in air is 40˚ and the angle of refraction is 29˚?
4. Light traveling through air encounters a new medium which slows the light to 1.61 x 108 m/s. What is the index of refraction of the new medium?
5. What is the index of refraction of a medium if the angle of incidence in air is 30˚ and the angle of refraction is 15˚?
6. What is the angle of incidence for a light ray traveling from water into flint glass, if the angle of refraction is 30˚?
7. What is the refractive medium if a ray coming from air at an angle of 50˚ is refracted at an angle of 35˚?
8. What is the speed of light in **miles per hour** in a material with an index of refraction of 2.0?