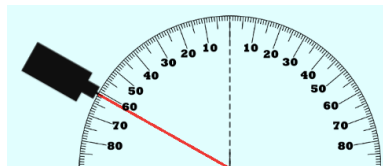
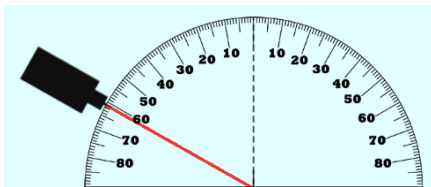


# Study Guide to take Retake on Reflection / Refraction

1. Label the following on BOTH pictures
  - Incoming Line
  - Angle of Incidence
  - Normal Line (you will have to draw in)
  - Reflected Line
  - Angle of Reflection



2. When an object hits a surface through which it cannot pass and bounces back, it is called?
3. The bending of light as it passes from one substance to another, is called?
4. What is the name of the line, that goes straight up and down, where you measure the angle of reflection, refraction or incidence called?
5. Draw in where the **reflection ray** would be on for all 3 images below.



6. How does the angle of incidence compare to the angle of reflection?
7. The \_\_\_\_\_ the speed of light in a material, the higher (larger) its refractive index.
  - a. (faster, slower, or same)
8. The \_\_\_\_\_ the speed of light in a material, the lower (smaller) its refractive index.
  - a. (faster, slower, or same)

| Transparent Material | Refracted Index Number |
|----------------------|------------------------|
| Water                | 1.33                   |
| Glass                | 1.53                   |
| Transparent Plastic  | 1.50                   |
| Silica               | 1.44                   |
| Crystal              | 2.00                   |
| Ruby                 | 1.77                   |
| Stain Glass          | 1.61                   |

9. From the choices in the table above, which transparent material does light travel through the fastest?
10. From the choices in the table above, which transparent material does light travel through the slowest?
11. From the choices in the table above, which transparent material does would bend light (refract) the most?
12. From the choices in the table above, which transparent material does would bend light (refract) the least?