Bending Light PhET Lab **Name:**

Go to https://phet.colorado.edu/en/simulation/bending-light and open the Bending Light Sim. Click on **Intro**.

Move the **protractor** and line it up with the surface of the interface between the two materials.

Press the **red button** to turn on the laser.

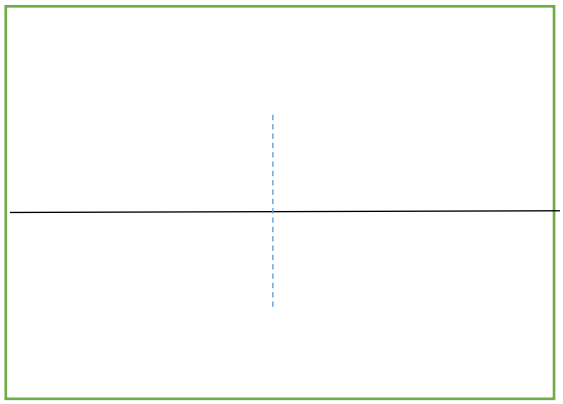
For each scenario, select the top and bottom material as specified in each data table. Record the index of refraction, n, for each material in the data table. Choose **two** different incident angles between 5° – 85° for each scenario, and record the incident, reflected, and refracted angles in the table.

After filing in the table, draw the rays as they are in the sim.

Top Material: Air **Top Index of Refraction (n):**

Bottom Material: Water **Bottom Index of Refraction (n):**

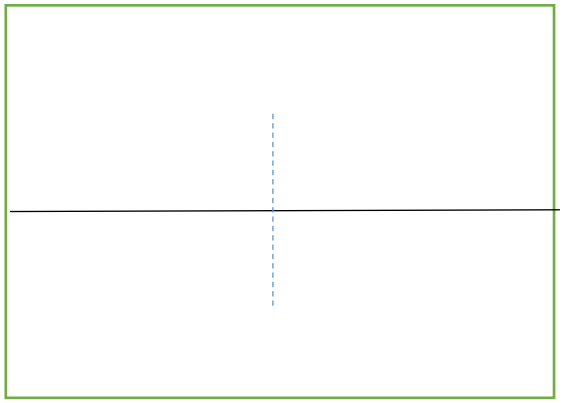
Incident Angle	Reflected Angle	Refracted Angle



Top Material: Air **Top Index of Refraction (n):**

Bottom Material: Glass **Bottom Index of Refraction (n):**

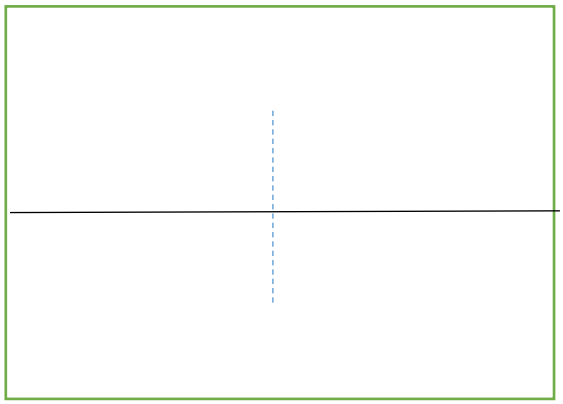
Incident Angle	Reflected Angle	Refracted Angle



Top Material: Water **Top Index of Refraction (n):**

Bottom Material: Glass **Bottom Index of Refraction (n):**

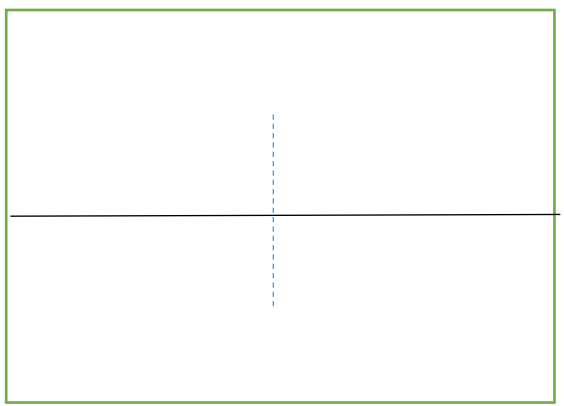
Incident Angle	Reflected Angle	Refracted Angle



Top Material: Water **Top Index of Refraction (n):**

Bottom Material: Air **Bottom Index of Refraction (n):**

Incident Angle	Reflected Angle	Refracted Angle



Based on your data in the data tables, what patterns do you observe? Write at least three summary points.

Click **home.** Click on **Prisms**.

Turn on the **laser**. Drag the **triangle prism** into the path of the laser. Click on the **Normal** button on the bottom right.

Draw the light rays, prism, and normal for your configuration below. Click on the protractor button & complete the table.

Angle of incidence	Angle of refraction

Change the light to **white light**. Rotate the prism until the light that comes out the other side of the prism is separated into the color spectrum. Draw your configuration indicating where the **red and blue** light is.

What color of light refracts more when moving through the prism? **WHY?**