FLINN SCIENTIFIC

Name_____

Make Your Own Clinometer Worksheet

Data Table

Object	Height of Observer's Eye (m)	Adjacent Side (m)	Angle θ	Tan θ	Opposite Side (m)	Total Height (m)

Post-Lab Calculations and Questions

1. Draw a right triangle below and label the following: right angle, elevation angle (θ), hypotenuse, adjacent side, opposite side.

2. Using a scientific calculator with a tangent key, find the tangent to angle θ for each object. Record the tangent of each angle in the data table.
3. Use Equation 1 from the *Background* section to determine the length of the opposite side for each object. Record the length of each opposite side in the data table.
4. Add the height of the observer's eye to the length of the opposite side (Equation 2) to determine the total height of each object. Record the total height for each object in the data table.
5. Two lab partners take turns using the same clinometer to sight the top of the school flagpole. They each obtain different angles from the instrument. Assuming the partners are using the clinometer correctly, explain how this is possible.