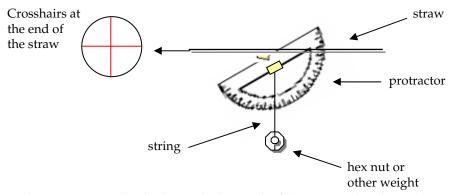
Name: Date:

Using a Clinometer

Materials needed to build a clinometer: protractor, drinking straw, transparent tape, string, thread, and a hex nut.

Follow the directions below to construct a clinometer:

- Tape one end of a 6-inch string to the midpoint (directly between the 0° and the 180° mark on the protractor) on the straight side of the protractor.
- Tape two pieces of string across the diameter on one end of the straw forming a crosshair.
- Tape the straw to the straight side of the protractor.
- Tie the hex nut to the other end of the string.



To use the clinometer you look through the end of the straw (without the crosshair) and align the crosshair with the object, allow the string to stop swaying and pinch the string against the curved edge of the protractor. The place where the string crosses the angle measures on the protractor will indicate the angle of elevation or the angle of depression.

A sketch of the situation is shown below. Label the things in the sketch including known measurements. Use variables to represent the unknown measurements. (Do not forget to label the angle represented by that shown on the clinometer.)

