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## DETERMINING THE HEIGHT OF TALL MONUMENTS WITH A CLINOMETER

There will occasionally be very tall monuments that you can't readily measure. One easy way to determine the height is to use a clinometer. These are about \$120 to \$200 from suppliers such as Ben Meadows or Forestry Suppliers. Or you can use what's called an Abney level and these are about \$80 from the same suppliers. You can also make your own for about \$10 (for information see the web page [http://www.rondexter.com/professional/sun/home-made\\_clinometer.htm](http://www.rondexter.com/professional/sun/home-made_clinometer.htm)).



1. General Use Instructions: Hold the clinometer to your eye and with both eyes open, look simultaneously through the lens and alongside the housing. A horizontal sighting line will appear. Raise or lower the clinometer (by tilting your head) to place the sighting line at the top or bottom of the object. Read the number closest to the sighting line.
2. For Height: Choose a scale and a convenient baseline distance (say 20 feet from the monument).
3. Standing at the baseline distance (20 feet), sight the tip or top of the monument and read the scale (for this example, let's say 28% or 0.28).
4. Remaining in that same spot, now sight the bottom of the monument and read the scale (for this example, let's say -12% or -0.12).
5. Total the two scale readings (ignore the minus sign, just add the two numbers;  $0.28 + 0.12 = 0.40$ ).
6. Multiply the total reading by the baseline distance ( $.40 \times 20 = 8$ ).
7. Thus, the monument is 8 feet in height.