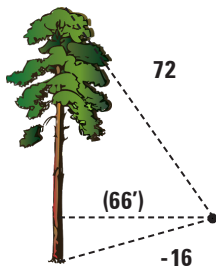


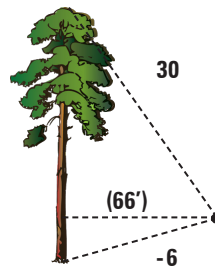
HOW TO USE A HANDHELD CLINOMETER TO MEASURE TREE HEIGHTS (TEACHER KEY)

A tree's height combined with a tree's DBH (Diameter Breast Height) allows foresters to estimate how much pulp, board foot, or saw timber the tree will produce once it is taken to the mill.

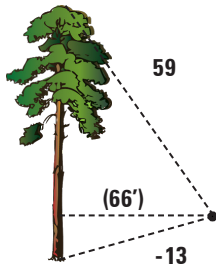
INSTRUCTIONS: A standard logger's measurement is one chain equaling a distance of 66 feet. Determine the top and base reading for each tree from the right side of the tape which is calibrated to take readings at this distance. All measurements are taken and recorded in feet. The numbers above your eye-line will be positive and the numbers below your eye line will be negative. For each tree, record the total height by adding the two numbers together (disregard the positive and negative for this calculation). For example, if your top reading is 50 and your base reading is -11, your tree height would equal 61. That number is then rounded down to the closest increment of 5. For instance, 61 would be rounded down to 60.



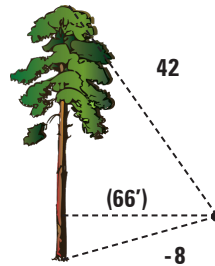
Top Reading: 72
 Base Reading: -16
 Tree Height: 88
 Rounded Height: 90



Top Reading: 30
 Base Reading: -6
 Tree Height: 36
 Rounded Height: 40



Top Reading: 59
 Base Reading: -13
 Tree Height: 72
 Rounded Height: 70



Top Reading: 42
 Base Reading: -8
 Tree Height: 50
 Rounded Height: 50

If you have a clinometer, find a group of four to five trees and measure their tree heights. Indicate where each tree is located and whether it is a pine or hardwood tree.

Location: _____	Location: _____	Location: _____	Location: _____	Location: _____
Species: _____	Species: _____	Species: _____	Species: _____	Species: _____
Top: _____	Top: _____	Top: _____	Top: _____	Top: _____
Base: _____	Base: _____	Base: _____	Base: _____	Base: _____
Height: _____	Height: _____	Height: _____	Height: _____	Height: _____
Rounded: _____	Rounded: _____	Rounded: _____	Rounded: _____	Rounded: _____