

FOR 100 – TIMBER CRUISE WORKSHEET

This worksheet will be completed by your team **during class time**. Although you will work as a team, **you as an individual must take responsibility to be sure that you understand how to perform each step of this activity**.

1. Your team will be assigned to one of the following two sample plots (circle your plot when it is assigned in class):

Sample Plot #1: 147 feet @ 254 degrees from the tie point

Sample Plot #2: 159 feet @ 247 degrees from the tie point

Use a compass and pacing to locate the center of your plot.

2. Use a 10 BAF prism to determine which (if any) trees are in your team's plot.
3. For each tree in your team's plot:
 - a. Measure the tree's dbh in inches (be sure to use the side of the d-tape that has larger distances between marks – this will be the side that is visible if you use the d-tape's hook to hold the tape while you wrap the tape around the tree). Remember: dbh is diameter, outside bark, 4.5' above ground, uphill side of tree. Record your results in the table below.
 - b. Measure the tree's height in feet (use a clinometer). Remember to pace 100 feet (this is approximately 1.5 chains) from each tree before using the clinometer, and be sure to use the clinometer's 1:100 scale (there are two scales inside the clinometer), *i.e.* use the % scale. Record the clinometer's readings for the tree's top and for the tree's bottom in the table below (be sure to include the + or – sign!). Then compute and enter the height in the table.
 - c. Estimate basal area of each sampled tree (use the formula $b=0.005454 \text{ dbh}^2$, where dbh is measured in inches, and b is basal area in square feet). Record your results in the table below.
4. From your plot's data, estimate total basal area (in square feet per acre). Use the formula: total basal area (sq. ft. per ac.) = BAF * (number of trees tallied per plot). Remember you are using a prism with BAF = 10. Record your result below.

	dbh (inches)	Basal Area (ft ²)	Clinometer Reading (Top of Tree)	Clinometer Reading (Bottom of Tree)	Tree Height (ft) (Top Clinometer Reading – Bottom Clinometer Reading)	Total Basal Area Estimated from this Plot (ft ² per acre)
Tree #1						
Tree #2						
Tree #3						
Tree #4						
Tree #5						

