

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: 176 feet @ 264 degrees from the tie point

Sample Plot #2: 176 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						

