

**Instructions:** You will measure 4 standing trees and fill out the table below. For each tree, identify the species and estimate the diameter and merchantable height. Diameter at Breast Height (DBH) should be measured and recorded in even 2-inch diameter classes. Height should be measured in 16-foot logs to the nearest full half-log. Merchantable height should be measured from stump height to either an 8-inch top diameter, a major fork, or a serious defect that affects more than half the tree's diameter at that point.

In addition, you will determine the total volume in the plot and the volume per acre. Ten points will be allowed for the correct volume per acre. The plot acreage and tree volumes can be found in the table below. Remember, the total volume in the plot must be multiplied by a factor (20 for a 1/20-acre plot, 10 for a 1/10-acre plot, 5 for a 1/5-acre plot and 4 for a 1/4-acre plot) to determine the volume per acre. Point allocation will be 10 points for  $\pm 5\%$  of the official volume, 8 points for  $\pm 10\%$ , 6 points for  $\pm 15\%$ , and no points over  $\pm 15\%$ .

The tree measurement volume table is provided on the back of this scoresheet.

Senior – Tree Measurement
BADGE NUMBER: _____
TOTAL SCORE: _____ / 30

Tree #	Species (1 pt)	DBH (2 pts)	Height (2 pts)	Volume	Score
1					
2					
3					
4					
	Total board foot volume in plot				
	Total board foot volume per acre				
a. Subtotal of tree scores (20 points possible)					
b. Score for volume per acre (10 points possible)					
TOTAL score (a + b)					

Plot size: \_\_\_\_\_

## Tree Measurement Volume Table

International ¼ inch Log Rule -- Form Class 78  
**VOLUME (board feet) BY NUMBER OF 16-FOOT LOGS**

DBH	HEIGHT (NUMBER OF 16-FOOT LOGS)								
	1	1½	2	2½	3	3½	4	4½	5
10	36	48	59	66	73	-----	-----	-----	-----
12	56	74	92	106	120	128	137	-----	-----
14	78	105	132	153	174	187	200	-----	-----
16	106	143	180	210	241	263	285	-----	-----
18	136	184	233	274	314	344	374	-----	-----
20	171	234	296	348	401	440	480	511	542
22	211	290	368	434	500	552	603	647	691
24	251	346	441	523	605	664	723	782	840
26	299	414	528	626	725	801	877	949	1,021
28	347	482	616	733	850	938	1,027	1,114	1,201
30	403	560	718	854	991	1,094	1,198	1,306	1,415
32	462	644	826	988	1,149	1,274	1,400	1,518	1,637
34	521	728	934	1,119	1,304	1,447	1,590	1,727	1,864
36	589	826	1,063	1,274	1,485	1,650	1,814	1,974	2,135
38	656	921	1,186	1,428	1,670	1,854	2,038	2,224	2,410
40	731	1,030	1,329	1,598	1,868	2,081	2,294	2,494	2,693