

Volume Rubric

Part 1 Oral Presentation

Name _____

Student demonstrates:	Presented	Correct
1. Understanding of a Cord		
a. Can give dimensions of a cord (l = 8ft, w = 4ft, h = 4ft)		
b. Can use formula to calculate ($v = l \times w \times h = 128$ cubic ft)		
c. Can discuss correction- due to air space volume = 90 ft ³		
2. Understanding of Board Feet		
a. Can give dimensions of a board foot (l=12", w=12", h=1")		
b. Can use formula to calculate ($v = l \times w \times h = 144$ cubic inches)		
c. Can discuss correction- due to bark and loss during cutting 12" x 12" x 12" = 6 board feet		
3. Understanding of Volume Tables		
a. Can use by finding <u>tree diameter</u> on left column		
b. And follow across to where it intersects with <u>height</u>		
4. Understanding of Standard Merchantable volume		
a. Discuss Standard Cord (=volume from cord table /90)		
b. Discuss MBF (one thousand board feet) =volume from saw timber table / 1000		
SCALE: 1 = Acceptable 0 = Unacceptable, Redo		

Part 3 Field Lab Activity

	Completed	Correct
1. Determines correct table based on diameter.		
2. Determines volume from table (using measured diameter & height)		
3. Checks partner's volume and initials data sheet.		
4. Calculates Standard volume.		
5. Correctly calculates Standard volume. (shows work)		
SCALE: 1 = Acceptable 0 = Unacceptable, Redo		

Name (person #1): _____ Tree: _____

Partner's name (person #2): _____ Tree: _____

Field Data Sheet

Diameter

Person #1	Estimation	Biltmore:	Diameter tape	Type tree	Wanted
Person #2	Estimation	Biltmore:	Diameter tape	Type tree	

What is the error of measurement?

What is the effect of the measurement error?

Height

	Estimation:		Measurement:		Wanted:
	Height	# of logs	# of logs	height	D or A
Person #1					
Person #2					

What is the error of measurement?

What is the effect of the measurement error?

Volume

	PW	ST	Volume	Std Cord = $v/90$	MBF(board feet)= $v/1000$	Wanted
Person #1						
Person #2						

Application

1. If a cord is worth \$75 then how much is your tree worth?
If a MBF is worth \$25 then how much is your tree worth?
2. Do you want your tree dead or alive? Justify your decision demonstrating your knowledge.

Pulpwood Volume Table
(cubic-foot volume, second-growth Southern Pine)

Dbh	Number of 5¼-foot Sticks						
	4	5	6	7	8	9	10
5"	2.0	2.5					
6"	2.8	3.6	4.2	4.9			
7"	3.7	4.7	5.6	6.5	7.4		
8"	4.8	6.0	7.2	8.5	9.5	10.8	
9"	5.9	7.4	8.9	10.4	11.9	13.4	14.9
10"	7.1	8.9	10.6	12.5	14.3	16.1	17.8
11"	8.5	10.6	12.7	14.8	16.9	19.0	21.2

Gross Tree Volume Table
Scribner Log Rule, Form Class 78

Volume (Board Feet) by Number of Usable 16-foot Logs

Dbh	Number of Usable 16-foot Logs						
	1	1½	2	2½	3	3½	4
10"	28	36	44	48	52	-	-
11"	38	49	60	67	74	-	-
12"	47	61	75	85	95	100	106
13"	58	76	94	107	120	128	136
14"	69	92	114	130	146	156	166
15"	82	109	136	157	178	192	206
16"	95	127	159	185	211	229	247
17"	109	146	184	215	246	268	289
18"	123	166	209	244	280	306	331
19"	140	190	240	281	322	352	382
20"	157	214	270	317	364	398	432
21"	176	240	304	358	411	450	490
22"	194	266	338	398	458	504	549
23"	214	294	374	441	508	558	607
24"	234	322	409	484	558	611	665