

TIMBER CRUISING FOR BOARD FOOT VOLUME

Score _____

Rank _____

Name Key

School Area 4

Use volume table below to determine total volume of trees tagged in this event. Stump height 6" above ground – Merchantable height 8" top.

VOLUME (BOARD FEET) BY NUMBER OF USABLE 16-FT. LOGS

Tree Dia Inches	Number of 16-ft. logs								
	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5
10	28	36	44	48	52	56	60		
11	38	49	60	67	74	82	91		
12	47	61	75	85	95	100	106	111	
13	58	76	94	107	120	128	136	144	
14	69	92	114	130	146	156	166	175	
15	82	109	136	157	178	192	206	220	
16	95	127	159	185	211	229	247	276	
17	109	146	184	215	246	268	289	311	332
18	123	166	209	244	280	306	331	355	379
19	140	190	240	281	322	352	382	412	442
20	157	214	270	317	364	398	432	459	486
21	176	240	304	358	411	450	490	523	556
22	194	266	338	398	458	504	549	588	626
23	214	294	374	441	508	558	607	652	698
24	234	322	409	484	558	611	665	718	770
25	258	355	452	534	617	678	740	799	858
26	281	388	494	585	676	745	814	880	945
27	304	420	536	636	736	811	886	959	1032
28	327	452	578	686	795	877	959	1040	1120
29	354	491	628	746	864	953	1042	1132	1222
30	382	530	678	806	933	1028	1124	1224	1325

Tree	Dia.	Pts.	Height	Pts.	Vol.
1	15		2 1/2		157
2	14		2 1/2		130
3	12		3		95
4	14		3 1/2		156
5	15		3		178
6	13		2 1/2		107
7	18		3 1/2		306
8	17		3 1/2		268
9	16		3		211
10	14		3 1/2		156

3 points for each correct diameter
 5 points for correct form class
 30 points for correct board ft volume/acre
 Minus 1 pt. for each +/- 1% BF volume/ac.

3 points for each correct height
 5 points for correct tonnage/acre
 Minus 1 pt. for each +/- 5% tonnage/ac.

* $\frac{1}{10}$
 Acres Cruised

1764
 Total BF

SCORING SPACE

Student's BF Volume/Acre _____

Correct BF Volume/Acre _____

Deviation (+ or - %) _____

Conversion to points (1%=1pt) _____

30 points minus deduction _____ add for total _____

Student's Tonnage/Acre _____

Correct Tonnage/Acre _____

Deviation (+ or - %) _____

Conversion to points (5%=1pt) _____

5 points minus deduction _____ add for total _____

Points for diameter _____ add for total _____

Points for height _____ add for total _____

Points for form class _____ add for total _____

Total Points _____

$1764 \text{ Total BF} / 1000 = 1.764 \text{ MBF}$

$1.764 \text{ MBF} \times 10 \text{ (mult. factor)} = 17.64 \text{ MBF/acre}$

$17.64 \text{ MBF/acre} \times 15,000 \text{ (wt. factor)} = 264,600 \text{ lbs./acre}$

$264,600 \text{ lbs./acre} = 132.3 \text{ tons/acre}$

* db at top of 1st 16' log, 12.74 14 dbh = Form Class

* Tree #: 10 Form Class: 91

Revised 2010.

Yellow

OCULAR ESTIMATION

Score _____

Name Key

School Area 4

Rank _____

Round diameters to the nearest inch. Round heights down to the nearest 5 ft. length.

List products: Pulpwood (PW) Chip-N-Saw (CNS) Sawtimber (ST)

Tree #	Diameter	Correct Diameter	Height	Correct Height	Product	Correct Product
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7	13	20	ST
8	8	60	PW
9	11	70	CNS
10	12	75	CNS

JUDGES SCORING SPACE

Number of Correct Diameters	_____ x 4 = _____
Number of Diameters +/- 1"	_____ x 2 = _____
Number of Correct Heights	_____ x 3 = _____
Number of Heights +/- 5'	_____ x 2 = _____
Number of Correct Products	_____ x 3 = _____
Total _____	

Scoring

- 4 Points Correct Diameter
- 2 Points Diameter +/- 1"
- 3 Points Correct Height
- 2 Points Height +/- 5'
- 3 Points Correct Product

Pulpwood Minimum 6" dbh
 Chip-N-Saw Minimum 9" dbh to 12" dbh maximum with at least 1½ clear logs (24 feet)
 Sawtimber Minimum 13" dbh with at least 1½ clear logs (24 feet)
 Any tree from which 1½ clear logs or 24 feet of clear logs cannot be cut from any portion of the tree will be classified as pulpwood.
 "Clear" is defined as being free of deforming limbs, forks, major sweeps and cankers

Georgia Agricultural Education
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Number of Correct Products	_____ x 10 = _____
Total _____	

10 Points Correct Product

Pulpwood Minimum 6" dbh
 Chip-N-Saw Minimum 9" dbh to 12" dbh maximum with at least 1½ clear logs (24 feet)
 Sawtimber Minimum 13" dbh with at least 1½ clear logs (24 feet)
 Any tree from which 1½ clear logs or 24 feet of clear logs cannot be cut from any portion of the tree will be classified as pulpwood.
 "Clear" is defined as being free of deforming limbs, forks, major sweeps and cankers.

TREE IDENTIFICATION

Name	School	Score	Rank
1.	21.	41.	61.
2.	22.	42.	62.
3.	23.	43.	63.
4.	24.	44.	64.
5.	25.	45.	65.
6.	26.	46.	66.
7.	27.	47.	67.
8.	28.	48.	68.
9.	29.	49.	69.
10.	30.	50.	70.
11.	31.	51.	
12.	32.	52.	
13.	33.	53.	
14.	34.	54.	
15.	35.	55.	
16.	36.	56.	
17.	37.	57.	
18.	38.	58.	
19.	39.	59.	
20.	40.	60.	
Tiebreakers			
	TB1.		
	TB2.		
	TB3.		
	TB4.		
	TB5.		
	TB6.		
	TB7.		
	TB8.		
	TB9.		
	TB10.		

SCORING SPACE

Completely Missed _____ x _____, pls each = _____ add for total deductions _____ Total Deductions _____

Half-Credit _____ x _____, pls each = _____ add for total deductions _____ Total Points out of 100 _____

Revised 2010

Junior Tree Identification

Score

Name	Score	School	Rank
1	25	61	70
2	26	62	71
3	27	63	72
4	28	64	73
5	29	65	74
6	30	66	75
7	31	67	76
8	32	68	77
9	33	69	78
10	34	70	79
11	35	71	80
12	36	72	81
13	37	73	82
14	38	74	83
15	39	75	84
16	40	76	85
17	41	77	86
18	42	78	87
19	43	79	88
20	44	80	89
21	45	81	90
22	46	82	91
23	47	83	92
24	48	84	93
25	49	85	94
26	50	86	95
27	51	87	96
28	52	88	97
29	53	89	98
30	54	90	99
31	55	91	100
32	56	92	101
33	57	93	102
34	58	94	103
35	59	95	104
36	60	96	105
37	61	97	106
38	62	98	107
39	63	99	108
40	64	100	109
41	65	101	110
42	66	102	111
43	67	103	112
44	68	104	113
45	69	105	114
46	70	106	115
47	71	107	116
48	72	108	117
49	73	109	118
50	74	110	119
51	75	111	120
52	76	112	121
53	77	113	122
54	78	114	123
55	79	115	124
56	80	116	125
57	81	117	126
58	82	118	127
59	83	119	128
60	84	120	129
61	85	121	130
62	86	122	131
63	87	123	132
64	88	124	133
65	89	125	134
66	90	126	135
67	91	127	136
68	92	128	137
69	93	129	138
70	94	130	139
71	95	131	140
72	96	132	141
73	97	133	142
74	98	134	143
75	99	135	144
76	100	136	145
77	101	137	146
78	102	138	147
79	103	139	148
80	104	140	149
81	105	141	150
82	106	142	151
83	107	143	152
84	108	144	153
85	109	145	154
86	110	146	155
87	111	147	156
88	112	148	157
89	113	149	158
90	114	150	159
91	115	151	160
92	116	152	161
93	117	153	162
94	118	154	163
95	119	155	164
96	120	156	165
97	121	157	166
98	122	158	167
99	123	159	168
100	124	160	169
101	125	161	170
102	126	162	171
103	127	163	172
104	128	164	173
105	129	165	174
106	130	166	175
107	131	167	176
108	132	168	177
109	133	169	178
110	134	170	179
111	135	171	180
112	136	172	181
113	137	173	182
114	138	174	183
115	139	175	184
116	140	176	185
117	141	177	186
118	142	178	187
119	143	179	188
120	144	180	189
121	145	181	190
122	146	182	191
123	147	183	192
124	148	184	193
125	149	185	194
126	150	186	195
127	151	187	196
128	152	188	197
129	153	189	198
130	154	190	199
131	155	191	200
132	156	192	201
133	157	193	202
134	158	194	203
135	159	195	204
136	160	196	205
137	161	197	206
138	162	198	207
139	163	199	208
140	164	200	209
141	165	201	210
142	166	202	211
143	167	203	212
144	168	204	213
145	169	205	214
146	170	206	215
147	171	207	216
148	172	208	217
149	173	209	218
150	174	210	219
151	175	211	220
152	176	212	221
153	177	213	222
154	178	214	223
155	179	215	224
156	180	216	225
157	181	217	226
158	182	218	227
159	183	219	228
160	184	220	229
161	185	221	230
162	186	222	231
163	187	223	232
164	188	224	233
165	189	225	234
166	190	226	235
167	191	227	236
168	192	228	237
169	193	229	238
170	194	230	239
171	195	231	240
172	196	232	241
173	197	233	242
174	198	234	243
175	199	235	244
176	200	236	245
177	201	237	246
178	202	238	247
179	203	239	248
180	204	240	249
181	205	241	250
182	206	242	251
183	207	243	252
184	208	244	253
185	209	245	254
186	210	246	255
187	211	247	256
188	212	248	257
189	213	249	258
190	214	250	259
191	215	251	260
192	216	252	261
193	217	253	262
194	218	254	263
195	219	255	264
196	220	256	265
197	221	257	266
198	222	258	267
199	223	259	268
200	224	260	269
201	225	261	270
202	226	262	271
203	227	263	272
204	228	264	273
205	229	265	274
206	230	266	275
207	231	267	276
208	232	268	277
209	233	269	278
210	234	270	279
211	235	271	280
212	236	272	281
213	237	273	282
214	238	274	283
215	239	275	284
216	240	276	285
217	241	277	286
218	242	278	287
219	243	279	288
220	244	280	289
221	245	281	290
222	246	282	291
223	247	283	292
224	248	284	293
225	249	285	294
226	250	286	295
227	251	287	296
228	252	288	297
229	253	289	298
230	254	290	299
231	255	291	300
232	256	292	301
233	257	293	302
234	258	294	303
235	259	295	304
236	260	296	305
237	261	297	306
238	262	298	307
239	263	299	308
240	264	300	309
241	265	301	310
242	266	302	311
243	267	303	312
244	268	304	313
245	269	305	314
246	270	306	315
247	271	307	316
248	272	308	317
249	273	309	318
250	274	310	319
251	275	311	320
252	276	312	321
253	277	313	322
254	278	314	323
255	279	315	324
256	280	316	325
257	281	317	326
258	282	318	327
259	283	319	328
260	284	320	329
261	285	321	330
262	286	322	331
263	287	323	332
264	288	324	333
265	289	325	334
266	290	326	335
267	291	327	336
268	292	328	337
269	293	329	338
270	294	330	339
271	295	331	340
272	296	332	341
273	297	333	342
274	298	334	343
275	299	335	344
276	300	336	345
277	301	337	346
278	302	338	347
279	303	339	348
280	304	340	349
281	305	341	350
282	306	342	351
283	307	343	352
284	308	344	353
285	309	345	354
286	310	346	355
287	311	347	356
288	312	348	357
289	313	349	358
290	314	350	359
291	315	351	360
292	316	352	361
293	317	353	362
294	318	354	363
295	319	355	364
296	320	356	365
297	321	357	366
298	322	358	367
299	323	359	368
300	324	360	369
301	325	361	370
302	326	362	371
303	327	363	372
304	328	364	373
305	329	365	374
306	330	366	375
307	331	367	376
308	332	368	377
309	333	369	378
310	334	370	379
311	335	371	380
312	336	372	381
313	337	373	382
314	338	374	383
315	339	375	384
316	340	376	385
317	341	377	386
318	342	378	387
319	343	379	388
320	344	380	389
321	345	381	390
322	346	382	391
323	347	383	392
324	348	384	393
325	349	385	394
326	350	386	395
327	351	387	396
328	352	388	397
329	353	389	398
330	354	390	399
331	355	391	400
332	356	392	401
333	357	393	402
334	358	394	403
335	359	395	404
336	360	396	405
337	361	397	406

FOREST MANAGEMENT

Name Key School Area 4 Score _____ Rank _____

Consider only the area within the radius measured from the sampling point to the most distant tally tree.

* 5600
Weight factor

1. List the species of tally trees (pines). Loblolly

2. Basal area per acre 60
Limiting distance = Diameter (inches & tenths) x 2.75
Sq. ft./acre

3. Volume 61.32
Cords per acre = $\frac{(\# \text{ of tally trees}) \times (\text{average total height})}{20 \times (\# \text{ of sampling points})}$ = 21.9 Cords/acre

Tons per acre = $\frac{(\# \text{ of cords}) \times (\text{weight factor})}{2000}$ =

Judges Scoring Space	
1. 20 points Species	_____
3. 50 points BA	_____
4. 30 points Volume	_____
Total Points	_____

FOREST MANAGEMENT

Name Key School Area 4 Score _____

Consider only the area within the radius measured from the sampling point to the most distant tally tree.

Management objective: MANAGE STAND FOR PINE TIMBER ONLY. BURN AREA SHOULD BE 90%.
B
5600
 Weight factor

76
57
84
82
60
81
17440

- Classify the stand according to type.
 A. Pine pulpwood B. Pine sawtimber
B
 Stand type
- List the species of tally trees (pines). Loblolly
 Stand type
- Basal area per acre
 Limiting distance = Diameter (inches & tenths) x 2.75
66
 Sq. ft./acre
- Volume
 Cords per acre = $\frac{(\# \text{ of tally trees}) \times (\text{average total height})}{20 \times (\# \text{ of sampling points})} = \frac{73}{21.9}$
 Tons per acre = $\frac{(\# \text{ of cords}) \times (\text{weight factor})}{2000}$
61.32
 Tons/acre
- Identify the greatest problem(s) in the stand.
 A. Understocked D. Insect infestation F. No problem
 B. Overstocked E. Disease G. Other problem
 C. Hardwood encroachment
- Which of the following cultural operation(s) would you prescribe for the stand?
 A. Prescribed burning D. Prescribed burning and hardwood control F. Other
 B. Hardwood control E. Smoke Management G. Do Nothing
 C. Intermediate cutting
- To reach the pre-stated management objective, which of the following cuts would be appropriate?
 A. Seed tree C. Clearcut
 B. Selection D. No cut

Judges Scoring Space	
1. 10 points Stand type	_____
2. 10 points Species	_____
3. 30 points BA	_____
4. 10 points Volume	_____
5. 15 points Problem(s)	_____
6. 15 points Cultural operation(s)	_____
7. 10 points Reproduction method	_____

FORESTRY CDE
2007