

2011 National FFA Team Activity

State Team Name: _____

Mrs. Jones has several wooded tracts and has questions to ask her local forester (your group). You should work together to get the answers to the questions. The letters A-R refer to stops in the forest where you will need to take measurements and make observations. The rest of the questions may require this information to answer.

Notes:

Merchantable heights in this region are estimated to the upper point on a tree where it becomes 10 inches in diameter, OR, where a major fork in a tree stem occurs, OR, where a limb or cluster of limbs have a combined diameter equal to $\frac{1}{2}$ of the diameter of the tree at that point. These upper limit rules are called "stoppers". If there is at least one eight-foot log above a fork without a "stopper", continue measuring the main fork above the first stopper until the second stopper. Merchantable heights should be measured in 16 foot logs to the nearest one-half (8 foot) log.

When figuring tree volumes, all trees are considered sound for the purpose of this exercise (No cull deductions). There is no pulpwood market in this area.

Measure the tree diameters in 1-inch diameter classes.

Measure merchantable tree heights in 16-foot logs (to the nearest $\frac{1}{2}$ log).

Assume no declination (0*) when using compasses.

Needed Equipment: Biltmore Stick, compass, volume table

Use the tree volume table provided, NOT the scale on the Biltmore stick.

Each question is worth 1 point unless otherwise noted.

A.

1. Identify this tree. _____
2. What is the diameter of this tree? _____
3. What health disorder does this tree have? _____

B.

4. Identify this tree. _____
5. What health disorder does this tree have? _____

C.

6. Identify this tree. _____
7. What is the diameter of this tree? _____
8. What is the merchantable height? _____
9. What is the board foot volume? (3 points) _____
10. Assume that this tree has an 8 foot veneer butt log yielding 100 bdft. valued at \$1.40 per board foot, with the remainder of the volume being grade lumber with an average price of \$0.60 per board foot. Figure the value of this tree if we were to harvest it. (5 points) _____

D.

The marked "boundary" line here represents a corner boundary of Mrs. Jones' woods. There are two line segments with one corner...all points (start, corner, and stop) are marked by flagged orange rods. The flags hanging between the rods are only to assist you in finding the points...do not use them to sight a bearing.

11. Along what azimuth does the first leg of the marked "boundary" line extend?
(2 points) _____
12. How many feet is this first leg of the boundary. (3 points) _____
13. Along what azimuth does the second leg of the marked "boundary" line extend?
(2 points) _____
14. How many feet is this second leg of the boundary. (3 points) _____

E.

15. Identify this tree. _____
16. What is the diameter of this tree? _____
17. What is the merchantable height? _____
18. What is the board foot volume? (3 points) _____

F.

19. Identify this tree. _____
20. What is the diameter of this tree? _____
21. What is the merchantable height? _____
22. What is the board foot volume? (3 points) _____

G.

23. Identify this tree. _____
24. What is the diameter of this tree? _____
25. What is the merchantable height? _____
26. What is the board foot volume? (3 points) _____

H.

27. Identify this tree. _____
28. What is the diameter of this tree? _____
29. What is the merchantable height? _____
30. What is the board foot volume? (3 points) _____

I.

31. Identify this tree. _____
32. What is the diameter of this tree? _____
33. What health disorder does this tree have? _____

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J.

Use the provided USGS Topography Map to answer the following questions:

34. What is the name of this USGS Topography Map? (2 points) _____

35. What is the Scale of this USGS Topography Map? (2 points) _____

36. What is the Contour Interval of this USGS Topography Map? (2 points) _____

37. What is the elevation of Lake Taneycomo? (2 points) _____

38. What railroad crosses Lake Taneycomo? (2 points) _____

39. In what section, township and range is Edgewater Beach located? (2 points) _____

40. In what section, township and range is Rockaway Beach located? (2 points) _____

41. What is the highest elevation of Section 2, T23N – R21W? (2 points) _____

K.

42. Identify this tool. _____

43. What are the units that Basal Area is measured in? _____

44. Use this tool to determine the Basal Area at this point. (3 points) _____

L.

45. Identify this tool. _____

46. What are two uses for this tool. (4 points) _____
and _____

47. What is the slope between the two saplings that have 3 orange flags around them? (3 points) _____

M.

48. Identify this tree. _____

49. What is the diameter of this tree? _____

50. What is the merchantable height (do not go above the main fork)? _____

51. What is the board foot volume? (3 points) _____

N.

52. Identify this tree. _____

53. What is the diameter of this tree? _____

54. What is the merchantable height? _____

55. What is the board foot volume? (3 points) _____

O.

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56. Along what azimuth does the first leg of the marked "boundary" line extend?
(2 points) _____
57. How many feet is this first leg of the boundary. (3 points) _____
58. Along what azimuth does the second leg of the marked "boundary" line extend?
(2 points) _____
59. How many feet is this second leg of the boundary. (3 points) _____

P.

60. Identify this tool. _____
61. What are uses for this tool? (2 points) _____

Q.

62. Identify this tree. _____
63. What is the diameter of this tree? _____
64. Is this tree dead or alive? _____

R.

The marked "boundary" line here represents a corner boundary of Mrs. Jones' woods. There are two line segments with one corner...all points (start, corner, and stop) are marked by flagged orange rods. The flags hanging between the rods are only to assist you in finding the points...do not use them to sight a bearing.

65. Along what azimuth does the first leg of the marked "boundary" line extend?
(2 points) _____
66. How many feet is this first leg of the boundary. (3 points) _____
67. Along what azimuth does the second leg of the marked "boundary" line extend?
(2 points) _____
68. How many feet is this second leg of the boundary. (3 points) _____

Last Question!!!

69. If the 7 trees that were measured (C9, E18, F22, G26, H30, M51, N55) are the cut trees on a 1/4 acre inventory plot, what is the board foot volume per acre to be cut? (5 points) _____