

2010 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 next 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 health disorder does this tree have? _____
3. Other than lumber products, what benefit might this tree provide?

B.

4. Identify this tree. _____
5. What is the diameter of this tree? _____
6. What is the merchantable height? _____
7. What is the board foot volume? (4 points) _____
8. Is this tree alive or dead? _____

C.

9. Identify this tree. _____
10. What is the diameter of this tree? _____
11. What is the merchantable height? _____
12. What is the board foot volume? (4 points) _____

D.

13. Identify this tree. _____
14. What is the diameter of this tree? _____
15. What health disorder does this tree have? _____

E.

16. Identify this tree. _____
17. What is the diameter of this tree? _____
18. What is the merchantable height? _____
19. What is the board foot volume? (4 points) _____

F.

Both points (start 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.

20. Along what azimuth does the marked "boundary" line extend?
(3 points) _____
21. How many feet is this leg of the boundary. (4 points) _____

G.

22. Identify this tree. _____
23. What is the diameter of this tree? _____
24. Is this tree alive or dead? _____

H.

25. Identify this tree. _____
26. What is the diameter of this tree? _____
27. What is the merchantable height? _____
28. What is the board foot volume? (4 points) _____

I.

29. Identify this tree. _____
30. What is the diameter of this tree? _____
31. Other than lumber products, what benefit might this tree provide?

J.

32. Identify this tree. _____

K.

33. Identify this tree. _____
34. What is the diameter of this tree (flagged stem)? _____
35. What is the merchantable height? _____
36. What is the board foot volume? (4 points) _____

State Team Name: _____

L.

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.

37. Along what azimuth does the first leg of the marked "boundary" line extend?
(3 points) _____
38. How many feet is this first leg of the boundary. (4 points) _____
39. Along what azimuth does the second leg of the marked "boundary" line extend?
(3 points) _____
40. How many feet is this second leg of the boundary. (4 points) _____

M.

41. Identify this tree. _____
42. What is the diameter of this tree? _____

N.

43. Identify this tree. _____
44. What is the diameter of this tree? _____
45. What is the merchantable height? _____
46. What is the board foot volume? (4 points) _____
47. Assume that this tree has an 8 foot veneer butt log measuring 23 inches D.I.B. yielding 180 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) _____

O.

48. Identify this tool. _____
49. What are the units that Basal Area is measured in? _____
50. Use this tool to determine the Basal Area at this point. (5 points) _____

P.

Use the USGS Shawnee Bend Missouri Quadrangle Topography Map to answer the following questions:

51. What is scale of the Shawnee Bend Missouri Quadrangle? (3 points) _____
52. What is the contour interval of the Shawnee Bend Missouri Quadrangle? (3 points) _____
53. Describe, to the nearest $\frac{1}{4}$ section, the location of Racket School. (3 points) _____
54. What is the highest point of Section 7, T40N-R22W? (3 points) _____
55. What highway crosses South Grand River? (3 points) _____
56. A legal township has 36 sections. How many acres are in a standard section? (3 points) _____
57. What is the high water elevation of Lake of the Ozarks? (3 points) _____
58. What is the elevation of Sunnyside School? (3 points) _____

Q.

59. Identify this tree. _____

60. What is the diameter of this tree? _____

61. What is the merchantable height? _____

R.

62. Identify this tree. _____

Last Question!!!

63. If the 6 trees that were measured (B7, C12, E19, H28, K36, N46) are the cut trees on a 1/4 acre inventory plot, what is the board foot volume per acre to be cut? (6 points) _____