Binary Trees Worksheet

Questions 1 – 3 refer to the following tree diagram.

51

60

42

49

25

70

32

64

58

1. Which of the following list of numbers produces the binary search tree shown above? Assume the numbers were inserted into the tree structure from left to right.
2. 32 25 49 42 51 60 58 70 64
3. 51 60 58 42 70 49 25 64 32
4. 51 42 25 64 32 70 58 49 60
5. 32 64 25 49 58 70 42 60 51
6. Which of the following list of numbers correctly shows a preorder traversal of the tree shown above?
7. 25 32 42 49 51 58 60 64 70
8. 51 42 25 32 49 60 58 70 64
9. 51 42 25 32 49 60 58 64 70
10. 51 42 60 25 49 58 70 32 64
11. Which of the following list of numbers correctly shows an inorder traversal of the tree shown above?
12. 51 42 60 25 49 58 70 32 64
13. 25 32 42 49 51 58 60 64 70
14. 51 42 25 49 32 60 58 70 64
15. 51 42 25 32 49 60 70 64 58

Questions 4 – 6 refer to the following tree diagram.

40

55

35

80

20

70

45

25

50

10

1. Which of the following list of numbers produces the binary search tree shown above? Assume the numbers were inserted into the tree structure from left to right.
2. 40 35 55 20 45 70 10 25 50 80
3. 10 20 25 35 40 45 50 55 70 80
4. 10 25 20 35 50 45 80 70 55 40
5. 40 35 20 10 25 55 45 70 80 50
6. Which of the following list of numbers correctly shows a preorder traversal of the tree shown above?
7. 40 35 55 20 45 70 10 25 50 80
8. 40 35 20 10 25 55 45 50 70 80
9. 10 25 20 35 50 45 80 70 55 40
10. 10 20 25 35 40 45 50 55 70 80
11. Which of the following list of numbers correctly shows a postorder traversal of the tree shown above?
12. 10 25 20 35 50 45 80 70 55 40
13. 40 35 20 10 25 55 45 50 70 80
14. 10 20 25 35 40 45 50 55 70 80
15. 10 25 50 80 20 45 70 35 55 40