

1. Three properties of a tree:

- Have node, branch, leaves
- A connected, undirected graph that is acyclic.
- A tree is a forest, but a forest is not a tree.

2. Yes

3. Root

4. One

5. Yes

6. 13, 6, 60

7. 7

8. None

9. 4, 12, 7, 22

10. 13, 6, 60, 23, 21

11. 23, 6, 21, 20, 9, 1

12. 22, 16, 7, 13, 60, 12, 4

13. 3

14. 3

15. 4

16. 6

17. No

18. No

19. No

20. No

21. Yes

22.  $n^h$

23.  $\log_n m$

24.  $\frac{n^h - 1}{n - 1}$

25.  $n^h - 1$