6. PROGRESSIONS

1. The nth term of G.P is $a_n = ar^{n-1}$ where 'r' represents ____

2. The nth term of a G.P is $2(0.5)^{n-1}$ then r ____

3. In the A.P 10, 7, 4 ---- –62, then 11th term from the last is ____

4. ____ term of G.P 1/3, 1/9, 1/27 ---- is 1/2187

5. n–1, n –2, n –3, ---- $a_n =$ ____

6. In an A.P a = –7, d = 5 then $a_{18} =$ ____

7. 2 + 3 + 4 + ----- + 100 = ____

8. –1, 1/4, 3/2 ----- $S_{81} =$ ____

9. In G.P, 1st term is 2, common ratio is –3 then 7th term is ____

10. 1, –2, 4, –8, ----- is a ____ Progression.

11. Common difference in 1/2, 1, 3/2 ----- is ____

12. $\sqrt{3}$, 3, $3\sqrt{3}$ is a ____

13. a=1/3, d= 4/3, the 8th term of an A.P is___

14. Arithmetic progression in which the common difference is 3. If 2 is added to every term of the progression, then the common difference of new A.P. is ____

15. In an A.P. first term is 8, common difference is 2, then ____ term becomes zero

16. 4, 8, 12, 16, ----- is ____ series.

17. Next 3 terms in series 3, 1, –1, –3 are ____

18. If x, x+2 & x+ 6 are the terms of G.P. then x is ____

19. In G.P. $a_{p+q} = m$, $a_{p-q} = n$. Then $a_p =$ ____

20. In 3+6+12+24 -----. Progression, the nth term is ____

21. $a_{12} = 37$, d = 3, then $S_{12} =$ ____

22. In the garden, there are 23 roses in the first row, in the 2nd row there are 19. At the last row there are 7 trees, ____ rows of rose trees are there in the garden.

23. From 10 to 250, ____ multiples of 4 are there.

24. The taxi takes Rs. 30 for 1 hour. After for each hour Rs. 10, for each hour. how much money can be paid & how it forms ____ progression

25. The sum of first 20 odd numbers is ____

26. $10, 7, 4, ----- a_{30} = $ ____

27. $1+ 2+3+4+ ----- +100 = $ ____

28. In the G.P $25, –5, 1, –1/5 ----- r = $ ____

29. The reciprocals of terms of G.P will form ____

30. If $–2/7, x, –7/2$ are in G.P. Then $x = $ ____

31. $1 + 2 + 3 + ----- + 10 = $ ____

32. If a, b, c are in G.P, then $b/a = $ ____

33. $x, 4x/3, 5x/3, .. a_6 = . $ ____

34. In a G.P $a_4 = $ ____

35. $1/1000, 1/100, 1/10, 1 -----$ are in ____

36. The 10th term from the end of the A.P;
    $4, 9, 14 ----- 254$ is ____

37. In a G.P. $a_{n–1} = $ ____

38. In a A.P. $S_n – S_{n–1} = $ ____

39. $1.2 + 2.3 + 3.4 + ------ 5$ terms $= $ ____

40. In a series $a_n = \dfrac{n(n+3)}{n+2}, a_{17} = $ ____

41. In $–3, –1/2, 2 -----.$ A.P. then n^{th} term ____

42. $a_3 = 5$ & $a_7 = 9$, then the A.P. is ____

43. The nth term of the G.P. $2(0.5)^{n-1}$, then the common ratio $= $ ____

44. In $4, –8, 16, –32$ then the common ratio is ____

45. The nth term $t_n = \dfrac{n}{n+1}$ then $t_4 = $ ____

46. In an A.P, $l = 28, S_n = 144$ & total terms are 9, then the first term is ____

47. In an A.P 11th term is 38 and 16th term is 73, then common difference of A.P is ____

48. In a garden there are 32 rose flowers in first row and 29 flowers in 2nd row and 26 flowers in 3rd row, then ____ rose trees are there in the 6th row.

49. In $–5, –1, 3, 7 ------.$ Progression, then 6th term is ____

50. In Arithmetic progression, the sum of nth terms is $4n-n^2$, then first term is _____

ANSWERS

1) Common ratio; 2) 0.5; 3) –32; 4) 7;

5) 0; 6) 78; 7) 5049; 8) 3969; 9) 1458;

10) GP; 11) 1/2; 12) GP; 13) 29/3; 14) 3; 15) 5th term;

16) Arithmetic; 17) –5, –7, –9; 18) 2; 19) $\sqrt{mn}$; 20) 3.2^{n-1}; 21) 246;

22) 9; 23) 60; 24) Arithmetic progression; 25) 400; 26) –77;

27) 5050; 28) –1/5 ;

29) Geometric Progression; 30) ±1;

31) 55; 32) c/b ; 33) 8x/3; 34) ar^3;

35) G.P.; 36) 209; 37) ar^{n-2}; 38)a_n; 39) 70; 40) 340/19; 41)

1/2(5n–11); 42) 3, 4, 5, 6, 7; 43) 0.5; 44) –2; 45) 4/5; 46) 4;

47) 7; 48) 17; 49) 15; 50) 3.