EduSahara™ Assignment

Name : Nth Term and Sum of N Terms

Chapter : Arthimetic Progressions

Grade : CBSE Grade X

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1. The first term of the A.P. $4, 13, 22, 31, 40, \ldots =$

   (i) 4 (ii) 31 (iii) 13 (iv) 22 (v) 40

2. The first term of the A.P. $\frac{7}{5}, \frac{68}{45}, \frac{73}{45}, \frac{26}{15}, \frac{83}{45}, \ldots =$

   (i) $\frac{7}{5}$ (ii) $\frac{26}{15}$ (iii) $\frac{73}{45}$ (iv) $\frac{83}{45}$ (v) $\frac{68}{45}$

3. The common difference of the A.P. $2, 10, 18, \ldots =$

   (i) 7 (ii) 8 (iii) 6 (iv) 11 (v) 9

4. The common difference of the A.P. $\frac{1}{2}, \frac{2}{3}, \frac{5}{6}, \ldots =$

   (i) $\frac{1}{2}$ (ii) $\frac{1}{4}$ (iii) $(\frac{-1}{6})$ (iv) $\frac{1}{6}$ (v) $\frac{1}{8}$

5. Find t_{25} of the A.P. $9, 12, 15, \ldots =$

   (i) 82 (ii) 79 (iii) 80 (iv) 83 (v) 81

6. Find t_7 of the A.P. $\frac{5}{3}, 2, \frac{7}{3}, \ldots =$

   (i) 11 (ii) $\frac{11}{5}$ (iii) $\frac{13}{3}$ (iv) $\frac{11}{3}$ (v) 3

7. Find S_9 of the A.P. $2, 5, 8, \ldots =$

   (i) 123 (ii) 127 (iii) 129 (iv) 126 (v) 125

8. Find S_{20} of the A.P. $\frac{9}{4}, \frac{11}{4}, \frac{13}{4}, \ldots =$

   (i) 137 (ii) 142 (iii) 139 (iv) 140 (v) 141

9. Determine t_8 of an A.P whose t_5 is 17 and common difference is 3

   (i) 27 (ii) 24 (iii) 29 (iv) 26 (v) 25

10. Determine t_{11} of an A.P whose t_{19} is $\frac{29}{8}$ and common difference is $\frac{1}{6}$

    (i) $\frac{55}{24}$ (ii) $\frac{19}{8}$ (iii) $\frac{5}{2}$ (iv) $\frac{53}{24}$ (v) $\frac{55}{26}$

11. The t_{12} of an A.P. is 85 and the t_{18} is 127 . Find t_{17}.

    (i) 119 (ii) 120 (iii) 123 (iv) 117 (v) 121

12. The t_{12} of an A.P. is $\frac{97}{35}$ and the t_{18} is $\frac{139}{35}$. Find t_6.

(i) $\frac{13}{7}$ (ii) $\frac{9}{7}$ (iii) $\frac{11}{5}$ (iv) $\frac{11}{7}$ (v) $\frac{11}{9}$

13. Which term of the A.P. $2, 4, 6, \ldots$ is 18 ?

(i) t_8 (ii) t_{10} (iii) t_{12} (iv) t_9 (v) t_7

14. Which term of the A.P. $\frac{3}{7}, \frac{34}{63}, \frac{41}{63}, \ldots$ is $\frac{139}{63}$?

(i) t_{17} (ii) t_{16} (iii) t_{20} (iv) t_{14} (v) t_{18}

15. The sum of first three terms of an A.P. is 27 while their product is 693. Find the A.P.

(i) $8, 10, 12, \ldots$ (ii) $7, 6, 5, \ldots$ (iii) $7, 8, 9, \ldots$ (iv) $10, 12, 14, \ldots$ (v) $7, 9, 11, \ldots$

16. The sum of first three terms of an A.P. is $\frac{13}{6}$ while their product is $\frac{143}{729}$. Find the A.P.

(i) $\frac{4}{9}, \frac{17}{18}, \frac{13}{9}, \ldots$ (ii) $\frac{2}{9}, \frac{13}{18}, \frac{11}{9}, \ldots$ (iii) $\frac{2}{11}, \frac{15}{22}, \frac{13}{11}, \ldots$ (iv) $\frac{2}{9}, \frac{11}{9}, \frac{20}{9}, \ldots$ (v) $\frac{2}{9}, (\frac{-5}{18}), (\frac{-7}{9}), \ldots$

17. Insert 4 arithmetic means between 3 and 48.

(i) $11, 19, 27, 35$ (ii) $13, 23, 33, 43$ (iii) $14, 25, 36, 47$ (iv) $10, 17, 24, 31$ (v) $12, 21, 30, 39$

18. Insert 4 arithmetic means between $\frac{2}{3}$ and $\frac{11}{9}$.

(i) $\frac{7}{9}, \frac{8}{9}, 1, \frac{10}{9}$ (ii) $\frac{17}{21}, \frac{20}{21}, \frac{23}{21}, \frac{26}{21}$ (iii) $\frac{25}{33}, \frac{28}{33}, \frac{31}{33}, \frac{34}{33}$ (iv) $\frac{5}{9}, \frac{4}{9}, \frac{1}{3}, \frac{2}{9}$ (v) $1, \frac{4}{3}, \frac{5}{3}, 2$

19. If $a = 3$ and $d = 9$, find t_6 of the A.P.

(i) 50 (ii) 48 (iii) 46 (iv) 49 (v) 47

20. If $a = \frac{1}{4}$ and $d = \frac{1}{3}$, find t_{10} of the A.P.

(i) $\frac{13}{6}$ (ii) $\frac{13}{2}$ (iii) $\frac{13}{4}$ (iv) $\frac{11}{4}$ (v) $\frac{15}{4}$

21. How many terms of the A.P. $2, 5, 8, \ldots$ are needed to make the sum 57 ?

(i) 9 (ii) 5 (iii) 7 (iv) 6 (v) 4

22. How many terms of the A.P. $\frac{9}{8}, \frac{13}{8}, \frac{17}{8}, \ldots$ are needed to make the sum 23 ?

(i) 7 (ii) 6 (iii) 11 (iv) 8 (v) 9

23. If $a = 63$ and $b = 73$,
the arithmetic mean of a and b =

(i) 67 (ii) 69 (iii) 66 (iv) 68 (v) 70

24. If $a = \frac{46}{5}$ and $b = \frac{51}{5}$,
the arithmetic mean of a and b =

(i) $\frac{97}{10}$ (ii) $\frac{97}{12}$ (iii) $\frac{99}{10}$ (iv) $\frac{19}{2}$ (v) $\frac{97}{8}$

25. Given $a = 8$, $d = 6$, $S_n = 100$, find t_n

(i) 31 (ii) 35 (iii) 33 (iv) 30 (v) 32

26. Given $a = 2$, $d = 3$, $S_n = 301$, find n

(i) 13 (ii) 14 (iii) 11 (iv) 17 (v) 15

27. Given $a = 5$, $d = 4$, $n = 6$, find t_n

(i) 26 (ii) 28 (iii) 22 (iv) 24 (v) 25

28. Given $a = 7$, $d = 9$, $n = 15$, find S_n

(i) 1047 (ii) 1051 (iii) 1049 (iv) 1052 (v) 1050

29. Given $t_n = 64$, $n = 9$, $S_n = 324$, find a

(i) 7 (ii) 11 (iii) 9 (iv) 5 (v) 8

30. Given $t_n = 32$, $n = 5$, $S_n = 100$, find d

(i) 6 (ii) 3 (iii) 5 (iv) 8 (v) 7

31. Given $t_n = 42$, $d = 7$, $n = 6$, find a

(i) 10 (ii) 7 (iii) 6 (iv) 5 (v) 8

32. Given $t_n = 72$, $d = 7$, $n = 10$, find S_n

(i) 405 (ii) 406 (iii) 404 (iv) 403 (v) 408

33. Given $t_n = 21$, $a = 5$, $n = 5$, find S_n

(i) 67 (ii) 64 (iii) 65 (iv) 62 (v) 66

34. Given $t_n = 75$, $a = 3$, $n = 9$, find d

(i) 8 (ii) 10 (iii) 9 (iv) 11 (v) 7

35. Find the common difference and next four terms of the following A.P. $\frac{7}{3}, \frac{38}{15}, \frac{41}{15}, \ldots =$

(i) $\frac{1}{5}; \frac{44}{15}, \frac{47}{15}, \frac{10}{3}, \frac{53}{15}$ (ii) $1\frac{1}{5}; \frac{89}{15}, \frac{107}{15}, \frac{25}{3}, \frac{143}{15}$ (iii) $1\frac{1}{5}; \frac{44}{15}, \frac{47}{15}, \frac{10}{3}, \frac{53}{15}$

(iv) $1\frac{1}{5}; (\frac{-1}{15}), (\frac{-13}{15}), (\frac{-5}{3}), (\frac{-37}{15})$

Assignment Key

1) (i)	2) (i)	3) (ii)	4) (iv)	5) (v)	6) (iv)
7) (iv)	8) (iv)	9) (iv)	10) (i)	11) (ii)	12) (iv)
13) (iv)	14) (i)	15) (v)	16) (ii)	17) (v)	18) (i)
19) (ii)	20) (iii)	21) (iv)	22) (iv)	23) (iv)	24) (i)
25) (v)	26) (ii)	27) (v)	28) (v)	29) (v)	30) (i)
31) (ii)	32) (i)	33) (iii)	34) (iii)	35) (i)	