EduSahara™ Assignment

Name : Nth Term and Sum of N Terms

Chapter : Arthimetic Progressions

Grade : CBSE Grade X

1. The first term of the A.P. $7, 8, 9, 10, 11, \ldots =$

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

2. The first term of the A.P. $\frac{5}{7}, \frac{17}{14}, \frac{12}{7}, \frac{31}{14}, \frac{19}{7}, \ldots =$

   (i) $\frac{5}{7}$ (ii) $\frac{31}{14}$ (iii) $\frac{19}{7}$ (iv) $\frac{12}{7}$ (v) $\frac{17}{14}$

3. The common difference of the A.P. $9, 14, 19, \ldots =$

   (i) 4 (ii) 5 (iii) 8 (iv) 6 (v) 3

4. The common difference of the A.P. $\frac{1}{8}, \frac{5}{8}, \frac{9}{8}, \ldots =$

   (i) $\frac{3}{2}$ (ii) 1 (iii) $(\frac{-1}{2})$ (iv) $\frac{1}{2}$ (v) $\frac{1}{4}$

5. Find t_{16} of the A.P. $7, 11, 15, \ldots =$

   (i) 67 (ii) 69 (iii) 68 (iv) 66 (v) 64

6. Find t_{20} of the A.P. $\frac{9}{5}, 2, \frac{11}{5}, \ldots =$

   (i) 6 (ii) $\frac{28}{3}$ (iii) $\frac{26}{5}$ (iv) 4 (v) $\frac{28}{5}$

7. Find S_{24} of the A.P. $6, 12, 18, \ldots =$

   (i) 1799 (ii) 1801 (iii) 1797 (iv) 1800 (v) 1802

8. Find S_{17} of the A.P. $\frac{7}{5}, \frac{33}{20}, \frac{19}{10}, \ldots =$

   (i) $\frac{289}{7}$ (ii) $\frac{289}{5}$ (iii) $\frac{291}{5}$ (iv) $\frac{287}{5}$ (v) $\frac{289}{3}$

9. Determine t_8 of an A.P whose t_{15} is 90 and common difference is 6

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

10. Determine t_{12} of an A.P whose t_6 is 2 and common difference is $\frac{1}{6}$

    (i) 4 (ii) 1 (iii) 3 (iv) 5 (v) 2

11. The t_8 of an A.P. is 29 and the t_5 is 20 . Find t_{16}.

    (i) 53 (ii) 50 (iii) 52 (iv) 56 (v) 54

12. The t_{14} of an A.P. is $\frac{61}{24}$ and the t_{10} is $\frac{15}{8}$. Find t_8.

(i) $\frac{13}{8}$ (ii) $\frac{35}{24}$ (iii) $\frac{37}{26}$ (iv) $\frac{37}{22}$ (v) $\frac{37}{24}$

13. Which term of the A.P. $9, 18, 27, \ldots$ is 171?

(i) t_{19} (ii) t_{18} (iii) t_{20} (iv) t_{17} (v) t_{22}

14. Which term of the A.P. $\frac{5}{9}, \frac{34}{45}, \frac{43}{45}, \ldots$ is $\frac{151}{45}$?

(i) t_{14} (ii) t_{13} (iii) t_{18} (iv) t_{15} (v) t_{16}

15. The sum of first three terms of an A.P. is 21 while their product is 315. Find the A.P.

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

16. The sum of first three terms of an A.P. is $\frac{17}{7}$ while their product is $\frac{680}{1323}$. Find the A.P.

(i) $\frac{2}{3}, \frac{11}{21}, \frac{8}{21}, \ldots$ (ii) $\frac{2}{3}, \frac{13}{15}, \frac{16}{15}, \ldots$ (iii) $\frac{4}{3}, \frac{31}{21}, \frac{34}{21}, \ldots$ (iv) $\frac{2}{3}, \frac{17}{21}, \frac{20}{21}, \ldots$ (v) $\frac{2}{5}, \frac{19}{35}, \frac{24}{35}, \ldots$

17. Insert 1 arithmetic means between 7 and 13.

(i) 12 (ii) 9 (iii) 10 (iv) 11 (v) 8

18. Insert 3 arithmetic means between $\frac{8}{7}$ and $\frac{15}{7}$.

(i) $\frac{25}{28}, \frac{9}{14}, \frac{11}{28}$ (ii) $\frac{23}{14}, \frac{15}{7}, \frac{37}{14}$ (iii) $\frac{55}{42}, \frac{31}{21}, \frac{23}{14}$ (iv) $\frac{39}{28}, \frac{23}{14}, \frac{53}{28}$ (v) $\frac{53}{28}, \frac{37}{14}, \frac{95}{28}$

19. If $a = 9$ and $d = 7$, find t_9 of the A.P.

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

20. If $a = \frac{7}{8}$ and $d = \frac{1}{7}$, find t_8 of the A.P.

(i) $\frac{17}{8}$ (ii) $\frac{3}{2}$ (iii) $\frac{5}{2}$ (iv) $\frac{15}{8}$ (v) $\frac{13}{8}$

21. How many terms of the A.P. $2, 8, 14, \ldots$ are needed to make the sum 234?

(i) 8 (ii) 6 (iii) 11 (iv) 10 (v) 9

22. How many terms of the A.P. $\frac{4}{7}, \frac{15}{14}, \frac{11}{7}, \ldots$ are needed to make the sum $\frac{544}{7}$?

(i) 15 (ii) 18 (iii) 20 (iv) 16 (v) 17

23. If $a = 15$ and $b = 19$,
the arithmetic mean of a and b =

(i) 17 (ii) 16 (iii) 15 (iv) 18 (v) 20

24. If $a = \frac{11}{2}$ and $b = \frac{103}{18}$,
the arithmetic mean of a and b =

(i) $\frac{11}{2}$ (ii) $\frac{101}{20}$ (iii) $\frac{101}{18}$ (iv) $\frac{103}{18}$ (v) $\frac{101}{16}$

25. Given $a = 6$, $d = 7$, $S_n = 375$, find t_n

(i) 69 (ii) 71 (iii) 67 (iv) 68 (v) 70

26. Given $a = 5$, $d = 7$, $S_n = 95$, find n

(i) 4 (ii) 3 (iii) 7 (iv) 5 (v) 6

27. Given $a = 8$, $d = 5$, $n = 15$, find t_n

(i) 81 (ii) 78 (iii) 77 (iv) 76 (v) 79

28. Given $a = 6$, $d = 9$, $n = 9$, find S_n

(i) 378 (ii) 381 (iii) 376 (iv) 379 (v) 377

29. Given $t_n = 30$, $n = 8$, $S_n = 156$, find a

(i) 12 (ii) 10 (iii) 6 (iv) 8 (v) 9

30. Given $t_n = 36$, $n = 9$, $S_n = 180$, find d

(i) 6 (ii) 5 (iii) 1 (iv) 4 (v) 3

31. Given $t_n = 153$, $d = 8$, $n = 19$, find a

(i) 10 (ii) 7 (iii) 12 (iv) 9 (v) 8

32. Given $t_n = 138$, $d = 8$, $n = 18$, find S_n

(i) 1257 (ii) 1262 (iii) 1260 (iv) 1261 (v) 1259

33. Given $t_n = 97$, $a = 9$, $n = 12$, find S_n

(i) 637 (ii) 636 (iii) 635 (iv) 633 (v) 639

34. Given $t_n = 38$, $a = 2$, $n = 13$, find d

(i) 1 (ii) 4 (iii) 2 (iv) 6 (v) 3

35. Find the common difference and next four terms of the following A.P. $\frac{9}{2}, \frac{83}{18}, \frac{85}{18}, \ldots =$

(i) $\frac{1}{9}; \frac{29}{6}, \frac{89}{18}, \frac{91}{18}, \frac{31}{6}$ (ii) $1\frac{1}{9}; \frac{47}{6}, \frac{161}{18}, \frac{181}{18}, \frac{67}{6}$ (iii) $1\frac{1}{9}; \frac{11}{6}, \frac{17}{18}, \frac{1}{18}, (\frac{-5}{6})$ (iv) $1\frac{1}{9}; \frac{29}{6}, \frac{89}{18}, \frac{91}{18}, \frac{31}{6}$

Assignment Key

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