

EduSahara™ Learning Center Assignment**Grade : Class X, CBSE****Chapter : Arithmetic Progressions****Name : Nth Term and Sum of N Terms**

1. The first term of the A.P. 6 , 11 , 16 , 21 , 26 , ... =

(i) 11 (ii) 6 (iii) 16 (iv) 21 (v) 26

2. The first term of the A.P. $\frac{1}{8}$, $\frac{13}{40}$, $\frac{21}{40}$, $\frac{29}{40}$, $\frac{37}{40}$, ... =

(i) $\frac{37}{40}$ (ii) $\frac{13}{40}$ (iii) $\frac{21}{40}$ (iv) $\frac{1}{8}$ (v) $\frac{29}{40}$

3. The common difference of the A.P. 8 , 9 , 10 , ... =

(i) -1 (ii) 3 (iii) 2 (iv) 0 (v) 1

4. The common difference of the A.P. $\frac{1}{6}$, $\frac{5}{18}$, $\frac{7}{18}$, ... =

(i) $\frac{1}{9}$ (ii) $(-\frac{1}{9})$ (iii) $\frac{1}{11}$ (iv) $\frac{1}{3}$ (v) $\frac{1}{7}$

5. Find t_{23} of the A.P. 7 , 8 , 9 , ... =

(i) 30 (ii) 28 (iii) 29 (iv) 31 (v) 27

6. Find t_{24} of the A.P. $\frac{4}{7}$, $\frac{27}{35}$, $\frac{34}{35}$, ... =

(i) $\frac{181}{33}$ (ii) $\frac{183}{35}$ (iii) $\frac{179}{35}$ (iv) $\frac{181}{37}$ (v) $\frac{181}{35}$

7. Find S_{23} of the A.P. 1 , 5 , 9 , ... =

(i) 1035 (ii) 1037 (iii) 1032 (iv) 1036 (v) 1034

8. Find S_8 of the A.P. $\frac{5}{2}$, $\frac{17}{6}$, $\frac{19}{6}$, ... =

(i) 88 (ii) $\frac{88}{3}$ (iii) $\frac{88}{5}$ (iv) $\frac{86}{3}$ (v) 30

9. Determine t_{20} of an A.P whose t_5 is 42 and common difference is 9

(i) 175 (ii) 177 (iii) 176 (iv) 178 (v) 179

10. Determine t_{16} of an A.P whose t_{10} is $\frac{8}{3}$ and common difference is $\frac{1}{6}$

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

11. The t_{13} of an A.P. is 68 and the t_{10} is 53 . Find t_8 .

- (i) 43 (ii) 40 (iii) 42 (iv) 44 (v) 46
-

12. The t_{20} of an A.P. is $\frac{138}{35}$ and the t_{14} is $\frac{96}{35}$. Find t_9 .

- (i) $\frac{9}{5}$ (ii) $\frac{59}{35}$ (iii) $\frac{61}{37}$ (iv) $\frac{61}{33}$ (v) $\frac{61}{35}$
-

13. Which term of the A.P. 6 , 14 , 22 , ... is 158 ?

- (i) t_{18} (ii) t_{23} (iii) t_{21} (iv) t_{20} (v) t_{19}
-

14. Which term of the A.P. $\frac{5}{6}$, $\frac{4}{3}$, $\frac{11}{6}$, ... is $\frac{28}{3}$?

- (i) t_{19} (ii) t_{17} (iii) t_{21} (iv) t_{16} (v) t_{18}
-

15. The sum of first three terms of an A.P. is 39
while their product is 1144 . Find the A.P.

- (i) 5 , 14 , 23 , ... (ii) 4 , 10 , 16 , ... (iii) 4 , 12 , 20 , ...
(iv) 4 , 13 , 22 , ... (v) 6 , 15 , 24 , ...
-

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) $\frac{2}{9}$, $\frac{11}{9}$, $\frac{20}{9}$, ... (ii) $\frac{4}{9}$, $\frac{17}{18}$, $\frac{13}{9}$, ... (iii) $\frac{2}{11}$, $\frac{15}{22}$, $\frac{13}{11}$, ...
(iv) $\frac{2}{9}$, $(-\frac{5}{18})$, $(-\frac{7}{9})$, ... (v) $\frac{2}{9}$, $\frac{13}{18}$, $\frac{11}{9}$, ...
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17. Insert 3 arithmetic means between 1 and 13 .

- (i) 6 , 11 , 16 (ii) 2 , 3 , 4 (iii) 3 , 5 , 7
(iv) 4 , 7 , 10 (v) 5 , 9 , 13
-

18. Insert 1 arithmetic means between $\frac{9}{8}$ and $\frac{35}{24}$.

- (i) $\frac{11}{8}$ (ii) $\frac{5}{4}$ (iii) $\frac{31}{24}$
(iv) $\frac{13}{8}$ (v) $\frac{23}{24}$
-

19. If $a = 8$ and $d = 3$, find t_3 of the A.P.

- (i) 15 (ii) 14 (iii) 17 (iv) 13 (v) 12
-

20. If $a = \frac{6}{7}$ and $d = \frac{1}{6}$, find t_4 of the A.P.

- (i) $\frac{19}{16}$ (ii) $\frac{17}{14}$ (iii) $\frac{3}{2}$ (iv) $\frac{19}{12}$ (v) $\frac{19}{14}$
-

21. How many terms of the A.P. $1, 5, 9, \dots$ are needed to make the sum 325 ?

- (i) 14 (ii) 10 (iii) 13 (iv) 15 (v) 12
-

22. How many terms of the A.P. $\frac{3}{5}, \frac{4}{5}, 1, \dots$ are needed to make the sum $\frac{117}{5}$?

- (i) 14 (ii) 11 (iii) 12 (iv) 13 (v) 16
-

23. If $a = 35$ and $b = 45$, the arithmetic mean of a and $b =$

- (i) 37 (ii) 39 (iii) 41 (iv) 42 (v) 40
-

24. If $a = \frac{97}{36}$ and $b = \frac{115}{36}$, the arithmetic mean of a and $b =$

- (i) $\frac{55}{18}$ (ii) $\frac{53}{16}$ (iii) $\frac{17}{6}$ (iv) $\frac{53}{18}$ (v) $\frac{53}{20}$
-

25. Given $a = 3$, $d = 5$, $S_n = 366$, find t_n

- (i) 59 (ii) 56 (iii) 58 (iv) 60 (v) 57
-

26. Given $a = 2$, $d = 4$, $S_n = 392$, find n

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

27. Given $a = 5$, $d = 5$, $n = 7$, find t_n

- (i) 32 (ii) 36 (iii) 34 (iv) 35 (v) 37
-

28. Given $a = 4$, $d = 7$, $n = 20$, find S_n

- (i) 1410 (ii) 1407 (iii) 1411 (iv) 1413 (v) 1409
-

29. Given $t_n = 78$, $n = 13$, $S_n = 546$, find a

- (i) 5 (ii) 3 (iii) 6 (iv) 7 (v) 9
-

30. Given $t_n = 29$, $n = 14$, $S_n = 224$, find d

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

31. Given $t_n = 75$, $d = 7$, $n = 11$, find a

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

32. Given $t_n = 39$, $d = 7$, $n = 6$, find S_n

- (i) 126 (ii) 129 (iii) 128 (iv) 131 (v) 130
-

33. Given $t_n = 23$, $a = 5$, $n = 10$, find S_n

- (i) 138 (ii) 140 (iii) 142 (iv) 139 (v) 141
-

34. Given $t_n = 40$, $a = 8$, $n = 5$, find d

- (i) 10 (ii) 6 (iii) 9 (iv) 8 (v) 7
-

35. Find the common difference and next four terms of the following A.P. $\frac{5}{2}, \frac{21}{8}, \frac{11}{4}, \dots =$

(i) $1\frac{1}{8}$; $(-\frac{1}{8})$, -1 , $(-\frac{15}{8})$, $(-\frac{11}{4})$

(ii) $1\frac{1}{8}$; $\frac{47}{8}$, 7 , $\frac{65}{8}$, $\frac{37}{4}$

(iii) $\frac{1}{8}$; $\frac{23}{8}$, 3 , $\frac{25}{8}$, $\frac{13}{4}$

(iv) $1\frac{1}{8}$; $\frac{23}{8}$, 3 , $\frac{25}{8}$, $\frac{13}{4}$

Assignment Key

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