

MATHEMATICS
CLASS – X
Chapter-5
Arithmetic Progressions



ZERO
PERIOD
We Believe in Learning

1. The sum of three numbers in AP is 27 and their product is 405. Find the numbers.
2. The sum of three numbers in AP is 15 and their product is 80. Find the numbers.
3. Find three numbers in AP whose sum is 3 and product is – 35.
4. Divide 24 in three parts such that they are in AP and their product is 440.
5. The sum of three consecutive terms of an AP is 21 and the sum of the squares of these terms is 165. Find the terms.
6. Find four numbers in AP whose sum is 20 and the sum of whose squares is 120.
7. Find four numbers in AP whose sum is 28 and the sum of whose squares is 216.
8. Find four numbers in AP whose sum is 50 and in which the greatest number is 4 times the least.
9. The angles of a quadrilateral are in AP whose common difference is 10° . Find the angles.
10. Show that $(a - b)^2$, $(a^2 + b^2)$ and $(a + b)^2$ are in AP.
11. If 10th times the 10th term of an AP is equal to 15 times the 15th term, show that its 25th term is zero.
12. If 5 times the 5th term of an AP is equal to 8 times its 8th term, show that the 13th term is 0.
13. How many terms are there in the AP 7, 11, 15, , 139?
14. How many terms are there in the AP 6, 10, 14, 18, 174?
15. How many three-digit numbers are divisible by 7?
16. How many multiples of 7 between 50 and 500?
17. How many multiples of 4 lie between 10 and 250?
18. How many terms are there in the AP 41, 38, 35, ..., 8.
19. Which term of the AP : 3, 8, 13, 18, ..., is 78?
20. Which term of the A.P. 5, 13, 21, ... is 181?
21. Which term of the A.P. 5, 9, 13, 17, ... is 81?
22. Which term of the AP 3, 8, 13, 18, will be 55 more than its 20th term?
23. Which term of the AP 8, 14, 20, 26, will be 72 more than its 41st term?
24. Which term of the AP 9, 12, 15, 18, will be 39 more than its 36th term?
25. Which term of the AP 3, 15, 27, 39, will be 120 more than its 21st term?
26. Which term of the AP 24, 21, 18, 15, is first negative term?
27. Which term of the AP 3, 8, 13, 18, is 88?
28. Which term of the AP 72, 68, 64, 60, is 0?
29. Which term of the AP : 3, 15, 27, 39, ... will be 132 more than its 54th term?
30. A sum of Rs. 1000 is invested at 8% simple interest per year. Calculate the interest at the end of each year. Does this interest form an AP? If so, find the interest at the end of 30 years.
31. In a flower bed, there are 23 rose plants in the first row, 21 in the second, 19 in the third, and so on. There are 5 rose plants in the last row. How many rows are there in the flower bed?
32. The sum of the 4th and 8th terms of an AP is 24 and the sum of the 6th and 10th terms is 44. Find the first three terms of the AP
33. Ms. Sumati started work in 1995 at an annual salary of Rs 5000 and received an increment of Rs 200 each year. In which year did his income reach Rs 7000?