

Comprehensive Test Series-4

Arithmetic Progression

TIME: 1.5hr

MM: 45

General Instructions:

- All Questions are compulsory.
 - Marks are given alongwith the questions individually.
 - Use of calculator is not permitted.
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- Q. 1 The 4th term of an A.P is three times the first and the 7th term exceeds twice the third term by 1. Find the first term and the common difference. (First term=-3, com. Diff.=2)
- Q. 2 Find the arithmetic progression whose third term is 16 and seventh term exceeds its fifth term by 12. (4, 10, 16, 22,)
- Q. 3 The 7th terms of an A.P is 32 and its 13th term is 62. Find the A.P. (2, 7, 12, 17,)
- Q. 4 Which term of the A.P. 3, 10, 17... will be 84 more than its 13th term? (25th)
- Q.5 How many multiples of 4 lie between 10 and 250? (60)
- Q. 6 How many three digit numbers are divisible by 7? (128)
- Q. 7 Which term of the A.P. 8, 14, 20, 26... will be 72 more than its 41st term? (53rd)
- Q. 8 Find the term of the A.P. 9, 12, 15, 18... which is 39 more than its 36th term. (49th)
- Q. 9 Find the 8th term from the end to the A.P 7, 10, 13...184. (163)
- Q. 10 Arun buys a scooter for Rs.22000. He pays Rs4000 in cash and agrees to pay the balance in annual installments of Rs1000 each plus 10% interest on the unpaid amount. How much will the cost him? (39100)
- Q. 11 A man repays a loan of Rs3250 by paying Rs20 in the first month and then increasing it by Rs15 every month. How long will it take him to clear the loan? (20months)
- Q. 12 A man saved Rs16500 in 10 years. In each year after the first the first year he saved Rs100 more than he did in the preceding year. How much did he save in the first year? (1200Rs)
- Q.13 A manufacturer of TV sets produced 6000 units in the third year and 7000 units in the seventh year. Assuming that the production increases uniformly by a fixed number every, find the production (i) in the first year, (ii) in the 10th year (iii) in 7 years.

(i) 5500units, (ii) 7750units, (iii) 43750units

- Q.14 Two cars start together in the same direction from the same place. The first goes with uniform speed of 40km/hr. The second goes at a speed of 36km/hr in the first hour and increases the speed by 1 km each succeeding hour. After how many hours will the second car overtake the first car if both cars go non-stop? (9hr)
- Q.15 There are 30 trees at equal distance of 5 meters in a line with a well, the distance of the well from the nearest tree being 10 meters. A Gardner waters all the tree separately starting from the well and he returns to the well after watering each trees to get water for the next. Find the total distance the Gardner will cover in order to water all the trees. (4795m)
- Q.16 A sum of Rs 62400 is paid off in 30 installments such that installment is Rs 100 more than the preceding installment. Calculate the first installment. (630)
- Q.17 The interior angles of a polygon are in AP. The smallest angle is 52° and the common difference is 8° . Find the number of sides of the polygon. (Three)
- Q.18 Find four numbers in AP whose sum is 20 and the sum of whose squares is 120. (2, 4, 6, 8,)