

Assignment Ch 5 Arithmetic Progression

Q1 If 7 times the 7th term of A.P is equal to 11 times its 11th term, then its 18th term will be

- (a) 7 (b) 11 (c) 18 (d) 0 (Ans. (d))

Q2 The mathematician associated with finding Sum of first 100 natural numbers is

- (a) Euclid (b) Newton (c) Gauss (d) none.

Q3 In an A.P if $a = 1$, $a_n = 20$, $S_n = 399$ then n is equal to (Ans. (c))

- (a) 19 (b) 21 (c) 38 (d) 42 (Ans. (c))

Q4 The Sum of first five multiples of 3 is

- (a) 45 (b) 55 (c) 65 (d) 75

Q5 Is '0' a term of A.P. 31, 28, 25, ...? Justify it. (Ans. a)

Q6 Find a, b, c such that numbers are in A.P

$$a, 7, b, 23, c \quad (-1, 15, 31)$$

Q7 Find the 20th term of A.P whose 7th term is 24 less than the 11th term, first term being 12.

Q8 Find k if $k^2 + 4k + 8, 2k^2 + 3k + 6, 3k^2 + 4k + 4$ are in A.P (Ans. 126)

$$(k = 0)$$

Q9 Find Sum of two middle most terms of an A.P

$$-\frac{4}{3}, -1, -\frac{2}{3}, \dots, 4\frac{1}{3}$$

$$(Ans. 3)$$

Q10 Which term of A.P 53, 48, 43, ... is the first -ve term.

$$(Ans. 12th)$$

Q11 Find Sum: $(4 - \frac{1}{n}) + (4 - \frac{2}{n}) + \dots$ upto n terms.

Q12 In an A.P $S_n = n(4n+1)$
then find the A.P. (ans $\frac{7n-1}{2}$)

Q13 Find Sum of last ten terms of ^{the} A.P.
8, 10, 12, ... 126 (ans: 5, 13, 21, ...)

Q14 find Sum of first seven terms which are multiples
of 2 as well as 9. (ans: 1170)
(ans = 504)

Q15 In an A.P, the P th term is $\frac{1}{q}$ and the q th term is $\frac{1}{p}$.
find (Pq) th term. (Ans 1)

Q16 A man repays a loan of ₹ 3250 by paying
₹ 20 in the first month and then increases
the payment by ₹ 15 every month. How long
will it be to take him to clear the loan.

Q17 The Sums of n terms of two A.Ps (ans 20 mon
ths)
are in the ratio $(5n+4) : (9n+6)$
find ratio of their 20th terms.

Q18 The Sum of four numbers in A.P is 40 and (ans 199: 357)
the ratio of the product of the extremes to
the product of means is 2:3. Find numbers.

Ans (4, 8, 12, 16
or 16, 12, 8, 4)