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RISE UP अॅकॅडमी

इयत्ता : 5 वी ते 10 वी

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Class: 10th | Subject : Algebra | Total Marks: 20

Date: | Time: 1 Hr

10th Algebra 20 Marks

Q.1) A) Choose the correct alternative for the following questions [02]

1) In an AP 1st term is 1 and the last term is 20. The sum of all terms is 399 then n = -------

a) 42 b) 38 c) 21 d) 19

2) For an A. P. a = 101, d = -4 then, what is the value of n, if t_n = 57.

a) 9 b) 10 c) 11 d) 12

Q.1) B) Solve the following questions [01]

1) Identify the following sequence are in A.P.? If they are A.P. find common difference :
$2, \frac{5}{2}, 3, \frac{7}{3}, \ldots$

Q.2) A) Complete any one activity [02]

1) In an A. P. a = 6, d = 3 then find S_{27}

$S_n = n/2\ [\square + (n - 1)\ \square]$

$= 27/2 \times \square = 27 \times 45 = \square$

2) In an A. P. the first term is -5 and the last term is 45. If sum of 'n' terms in the A. P. is 120, then complete the activity to find n.

$t_1 = -5$, $t_n = \square$, $S_n = \square$

$S_n = n/2\ [t_1 + \square]$ $\square = n/2\ [-5 + 45]$ $240 = n/2\ [-5 + 45]$

$240 = n \times \square$ $\therefore n = \square$

Q.2) B) Solve any One sub question [02]

1) Find 'n' if the nth term of the following A. P. is 66 : 3, 6, 9, 12, ----

2) On 1st Jan. 2016, Sanika decides to save Rs. 10, Rs. 11 on second day, Rs.12 on third day. If she decides to save like this, then on 31st December 2016 what would be her total saving?

Q.3) A) Complete any One activity [03]

1) If for an A. P. the first term is 11 and the common difference is (-2), then find first three terms of A. P.

2) Find t_n for the following A. P. and then find 30th term of A. P. : 3, 8, 13, 18, ----

Q.3) B) Solve any One sub questions [03]

1) Find a, b, c such that the following numbers are in A. P. : a, 7, b, 23, c.

2) If sum of 3rd and 8th terms of an A.P. is 7 and the sum of 7th and 14th terms is -3 then find 10th term.

Q.4) Solve any One sub questions [04]

1) If the sum of first p terms of an A.P. is equal to the sum of first q terms, then show that the sum of its first (p + q) terms is zero. ($p \neq q$)

2) There are 37 terms in an A.P., the sum of three terms placed exactly at the middle is 225 and the sum of last three is 429. Write the A.P.

Q.5) Solve any One sub question [03]

1) If the 5th term and 12th term of an A. P. are 14 and 35 respectively. find the first term and the common difference.

2) For an A. P. if $t_4 = 20$ and $t_7 = 32$, find a, d and t_n