Solutions Of Worksheet-4

SUBJECT – MATHEMATICS

1st term

Chapter: Sequence & Series	Class: XI
Topic: Arithmetic Progression (AP)	Date: 27.06.2020

Choose the correct option (1 X 15= 15)

1. The 6th term of the sequence {1, 4, 9, 16, … } is –
   a) 25
   b) 36
   c) 32
   d) 64

2. The 5th term of the sequence $\left\{3, 1, \frac{1}{3}, \frac{1}{9}, \ldots\right\}$ is –
   a) $\frac{1}{27}$
   b) $\frac{1}{15}$
   c) $\frac{1}{81}$
   d) $\frac{1}{12}$

3. The 8th term of the sequence {-8, -6, -4, -2, . . . } is –
   a) 2
   b) 4
   c) 6
   d) 8

4. The nth term of the sequence $\left\{1, \dfrac{1}{8}, \dfrac{1}{27}, \dfrac{1}{64}, \ \dots \right\}$ is –

   a) $\dfrac{1}{n}$ b) $\dfrac{1}{n^2}$ c) $\dfrac{1}{n^3}$ d) $\dfrac{1}{n^3-1}$

5. The 11th term of the sequence $\left\{\dfrac{1}{2}, \dfrac{1}{3}, \dfrac{1}{5}, \dfrac{1}{8}, \dfrac{1}{12}, \ \dots \right\}$ is –

   a) $\dfrac{1}{18}$

   b) $\dfrac{1}{16}$

   c) $\dfrac{1}{57}$

   d) $\dfrac{1}{59}$

6. For the sequence $\{u_n\}$ if $u_1 = -2$ and $u_{r+1} = u_r + r + 2$, for all natural numbers r , the 10th term of the sequence is –

   a) 36

   b) 63

   c) 62

   d) 39

7. The least value of n , for which the nth term a_n of the sequence given by $a_n = n^3 - n^2 - 5n - 3$ is non-negative –

   a) 1

   b) 2

   c) 3

   d) 4

8. Three numbers are in A.P. and their sum is 21, then the middle number is –

   a) 5

   b) 6

   c) 6.5

   d) 7

9. Five numbers are in A.P. and their sum is 50, then its 3rd number will be –

   a) 2
   b) 5
   c) 10
   d) 15

10. The base of a right angled triangle is 12cm. The three sides are in A.P. Then the length of the hypotenuse –
   a) Only 15cm
   b) Only 20cm
   c) Either a) or b) is true.
   d) Only 13cm.

11. The sums of pth terms of two A.P.'s are in the ratio $(2p+1) : (2p-1)$. Then the ratio of their 8th terms –
   a) 31 : 29
   b) 29 : 32
   c) 29 : 31
   d) 32 : 29

12. The 5th term of an A.P. is 30 and its 12th term is 65. Then the sum of its first 20 terms –
   a) 1510
   b) 1501
   c) 1150
   d) 1015

13. The A.M. of two numbers is 10 ; if one number is 7 then the other number will be –
   a) 11
   b) 12
   c) 13
   d) 14

14.   If the sum of 1st 2n terms of the A.P.   2, 5, 8, . . . is equal to the sum of 1st n terms of the A.P.   57, 59, 61, . . .   then n = ?

a) 11

b) 12

c) 13

d) 14

15.   The angles of a polygon are in A.P. having common difference 5°. If the least angle be 120° then the number of sides of the polygon –

a) 9

b) 16

c) 15

d) Either a) or b) is true.

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