Arithmetic Progressions

1] Sum of all first n terms of even natural number is

A] n(n+1) B] n(n + 2) C] n^2 D] $2n^2$

2] If a, b and c are arithmetic progression, then $\frac{b-a}{c-b}$ is equal to:

A] $\frac{b}{a}$ B] 0 C] 1 D] 2a

3] 13^{th} term of the A P x – 7, x – 2, x +3, ------ is

A] x + 73 B] x + 63 C] x + 83 D] x + 53

4] If the first term of an A.P. is 3, common difference is 2 then its 20th term is _____

A] 39 B] 41 C] 42 D] 43

5] In an A P if S_5 = 35 and S_4 = 22, then the 5^{th} term is:

A] 35 B] 10 C] 13 D] 22

6] The nth term of 3, 7, 11, 15, ----------is :

A] 4n – 1 B] 4n + 1 C] 4n + 3 D] 3n + 4

7] In a sequence, if $a_{n+1} = 4n + 5$, then a_n is :

A] 4n – 5 B] 4n – 1 C] 4n + 1 D] 4n + 5

8] In an Arithmetic Sequence, if a_4 = 8 and a = 2, then its common difference is:

A] 6 B] 4 C] 2 D] 10

9] In an A P the common difference is 3, first term is 1, then its tenth term is:

A] 27 B] 29 C] 30 D] 28

10] In an Arithmetic Progression a_{n+5} = 35 and a_{n+1} = 23, then common difference=

A] 3 B] 2 C] 3n D] 2n

11] In an Arithmetic Progression a_n = 3n – 1, then common difference is:

A] 1 B] 2 C] 3 D] 4

12] Ramu marked a dot in first square, 2 dots in second square, 3 dots in the third square and so on. Then The total number of squares required to mark a total of 55 dots is equal to:

A] 55 B] 11 C] 9 D] 10

13] Among the following, Arithmetic Progression is:

A] 1, 4, 6, ------- B] 12, 10, 14, ----- C] 35, 30, 25, ---- D] 8, 13, 19, ----

14] In an Arithmetic Progression, the correct relation is:

A] $a_{n-5} = a_{n-4}$ + d B] $a_{n-5} = a_{n-6}$ + d C] $a_{n-5} = a_n$ + d D} $a_{n-5} = a_n$ – d

15] The sum of an Arithmetic Series with 15 terms is 180. Then the 8^{th} term is

A] 8 B] 12 C] 15 D] 18

16] If 2x + 1, 4x, 13 – x are in Arithmetic Progression, then x is equal to:

A] 2 B] 3 C] 4 D] 5

17] A person continuously places 3 marbles in first box, 5 in second box, 7 in third box etc. the number of Marbles that he places in sixteenth box is:

A] 66 B] 33 C] 31 D] 35

18] In the first minute Geetha climbs 15 steps of a building. After that she climbs 3 steps less than in the Previous minute. The total number of steps climbed by Geetha in 5 minutes is:

A] 75 B] 105 C] 45 D] 50

19] In a progression, if a_n = 2n – 1, the fourth term is:

A] 23 B] 9 C] 5 D] 7

20] If 1 + 2 + 3 + ---------- + n = 78, then the value of n is:

A] 13 B] 12 C] 11 D] 16