**ASSIGNMENT (2020-21)**

**CLASS - X SUBJECT – MATHEMATICS**

 **CH- 5 (ARITHMETIC PROGRESSION)**

1. The famous mathematician associated with finding the sum of the first 100 natural numbers is :

$\left(a\right)$ Pythagoras $\left(b\right)$ Newton $\left(c\right)$ Gauss $\left(d\right)$ Euclid

1. The sum of first 16 terms of the A.P. 10, 6, 2, ………. is:

$\left(a\right)-320 \left(b\right) 320 \left(c\right)-352 \left(d\right)-400$

1. Next term of the A.P $\sqrt{3}, \sqrt{12}, \sqrt{27}, ………$ is

$\left(a\right) 9 \left(b\right) \sqrt{72} \left(c\right)\sqrt{48} \left(d\right)5\sqrt{3}$

1. Number of two digit numbers divisible by 7 are:

 $\left(a\right) 9 \left(b\right) 10 \left(c\right)12 \left(d\right)13$

1. In an A.P has $a=1, t\_{n}=20 and S\_{n}=399$, then find the value of $n$

 $\left(a\right) 20 \left(b\right) 32 \left(c\right)38 \left(d\right)40$

1. Find three numbers in A.P. whose sum is 21 and their product is 231.
2. If Sn the sum of n terms of an A.P. is given by Sn = 3n2 – 4n, find the nth term.
3. If the 8th term of an A.P. is 37 and the 15th term is 15 more than the 12th term, find the A.P. Hence find the sum of the first 15 terms of the A.P.
4. Solve the equation:  1 + 4 + 7 + 10 + ... + x = 287
5. Find the common difference of an A.P whose first term is 4, the last term is 49 and the sum of all its terms is 265.
6. Find the sum of all 3 digit numbers divisible by 11.
7. The sum first six terms of an A.P is 42. The ratio of its 10th term to its 30th term is 1 : 3. Calculate the first and thirteenth term of A.P.
8. In an A.P, the sum of first ten terms is -150 and the sum of its next terms is -550. Find the A.P.
9. Find the sum of the series: $\left(a-b\right)^{2}+\left(a^{2}+b^{2}\right)+\left(a+b\right)^{2}+…………+\left\{\left(a+b\right)^{2}+6ab\right\}$
10. The sum of $n, 2n, 3n$ term of an A.P are $S\_{1},S\_{2},S\_{3}$ respectively. Prove that $S\_{3}=3\left(S\_{2}-S\_{1}\right)$