GRADE 10   ARITHMETIC PROGRESSION

                              WORKSHEET

1. Find the 31st term of an AP whose 11th term is 38 and 16th term is 73.

2. If the 3rd and the 9th term of an AP are 4 and -8 respectively, which term of this AP is 0.

3. Which term of the AP 3, 15, 27, 39 , ... will be 132 more than its 54th term?

4. How many three digit numbers are divisible by 7?

5. For what values of n, are the nth terms of two APs: 63, 65, 67,... and 3, 10, 17, ... are equal?

6. The sum of the 4th and 8th terms of an AP is 24 and the sum of the 6th and 10th terms is 44. Find the first three terms of the AP

7. If the pth , q^{th} & r^{th} term of an AP is x, y and z respectively show that x(q-r) + y(r-p) + z(p-q) = 0 (HOTS)

8. Find the value of x if $2x + 1$, $x^2 + x +1$, $3x^2 - 3x +3$ are consecutive terms of an AP

9. Prove that $a_{m+n} + a_{m-n} = 2a_m$ (HOTS)

10. If the roots of the equation $(b-c)x^2 +(c-a)x +(a-b) = 0$ are equal show that a, b, c are in AP.

11. If the pth term of an AP is q and the qth term is p. P.T its nth term is (p+q-n). (HOTS)

12. Find the middle term of the AP 1, 8, 15….505.