

ASSIGNMENT  
CLASS: X  
SUBJECT: MATHEMATICS  
CHAPTERS - QUADRATIC EQUATIONS, ARITHMETIC PROGRESSION

1. If  $n$ th term of an A.P is  $7n+2$  then common difference is  
a) 12                      b) 5                      c) 7                      d) 19
2. The 7th term from the end of the A.P: 7, 11, 15, ..., 107 is  
a) 79                      b) 83                      c) 81                      d) 87
3. If one root of the equation  $x^2+ax+3=0$  is 1 then other root is  
a) 3                      b) -3                      c) 2                      d) -2
4. If the equation  $2kx^2-40x+25=0$  has equal roots then the value of  $k$  is  
a)  $5/4$                       b)  $4/5$                       c)  $3/4$                       d)  $4/3$
5. Find two consecutive odd positive integers whose sum of whose squares is 290.
6. In an A.P if  $S_n = n(4n+1)$  then find A.P. and common difference.
7. Find the number of integers between 50 and 500 which are divisible by 7?
8. If the sum of 3rd and 8th terms of an A.P is 7 and the sum of 7th and 14th terms is -3 .  
Find 10th term.
9. Find the nature of roots. If real roots exist then find them  
 $9x^2+7x-2 = 0$
10. Find the sum of first 20 terms of an A.P. in which 3rd term is 7 and the 7th term is two more than thrice of 3rd term.
11. If  $a_n = 3-4n$  then show that  $a_1, a_2, a_3, \dots$  form an A.P and find  $S_{20}$  also.
12. The diagonal of a rectangular field is 60 metres more than the shorter side. If the longest side is 30 metres more than the shorter side, find the sides of the field.
13. The first and last terms of an A.P are 7 and 49 respectively and the sum of all its terms is 420. Find the common difference.

