Grade 10



O1 Find the first 6 terms of the arithmetic progression for each of the following situations .

- (a) a=6 d=4
- (b) a=2 d=5
- (c) a=2y d=2y+2

2. Find the indicated term of each of the following arithmetic progression .

- (a) 9,15,21..... (10th term)
- (b) 35,50,65 .....(18 th term )
- (c) 24 , 50 , 65 .....(12th term )
- (d) 10.5, 17.5, 24.5..... (18th term )

3. Using the given information , find the term of the rlevant arithmetic progression for each of the following situations .

- (a)  $d=5 T_8=45$ (b)  $d=8 T_{10}=77$
- 4 Find the number of multiples of 8 between 50 and 500.

5 Find the sum of the following arithmetic progressions.,

(a) 3, 7, 11 n=30 (b) 5, 15, 25, 35 n=15

6 The n th term of an arithmetic progression is given by  $T_n=2x + 3nx$ 

- (a) Write down first four terms.
- (b) Find the sum of the first 15 terms .
- (c) Find the 18th term .

7 Solve each of the following inequities

- (a) 5x + 2 > 7 (b) 7x 1 < 10 (c)  $12 4y \le 0$  (d)
- 8 x < 2 yd y > -3 aaaaa a aaaaa) 5x + 2 > 7 b)7x 1 < 10 c)  $12 4y \le 0$

9 x < 3 y > 5 9) Shade the region satisfying the inequities x < 2 and y > -3 in a Cartesian plane.

10 information on the mass of goods exchanged by a courier service is given in the following frequency distribution .

mass (g)	mid value	frequency
100 - 102		20
102 - 104		12
104 - 106		25
106 - 108		8
108 - 110		13
110 - 112		14

(a) Complete the mid value column.

- (b) Calculate the mean mass of exchanged goods.
- (c) if Rs 3 is charged for a 1 gram of exchanged goods by the courier service, find the mean income that the company can expect.

11 A frequency distribution containing information on the number of telecasting hours of several educational programs of a certain television channel is given below.

telecasting time (minutes )	number of programs
20-30	4
30-40	5
40-50	6
50-60	2
60-70	3
70-80	1
80-90	2
90-100	3
100-110	4

- a) What is the modal class of this distribution.
- b) Find the mean telecasting time by taking the mid value of the class interval 60-70 as the assumed mean.