1. CASE STUDY CBSE MATHS

A Mahesh works as a manager in a hotel. He has to arrange seats in hall for a function. A hall has a certain number of chairs. Guests want to sit in different groups like in pairs, triplets, quadruplets, fives and sixes etc. When Mahesh arranges chairs in such pattern like in 2's, 3's, 4's 5's and 6's then 1, 2, 3, 4 and 5 chairs are left respectively. But when he arranges in 11's, no chair will be left.

(i) In the hall, how many chairs are available?

(a) 407 (b) 143 (c) 539 (d) 209

(ii) If one chair is removed, which arrangements are possible now?

(a) 2 (b) 3 (c) 4 (d) 5

(iii) If one chair is added to the total number of chairs, how many chairs will be left when arranged in 11's.

(a) 1 (b) 2 (c) 3 (d) 4

(iv) How many chairs will be left in original arrangement if same number of chairs will be arranged in 7's?

(a) 0 (b) 1 (c) 2 (d) 3

(v) How many chairs will be left in original arrangement if same number of chairs will be arranged in 9's?

(a) 8 (b) 1 (c) 6 (d) 3

B. Indian Army is the third biggest military contingent in the World next to USA and China.

However, there are many firsts that make Indian army stand out in the world, making us all Indians very proud. Knowing them, will help you celebrate Republic day with greater vigor and gratitude.

On 71th republic day Parade in Delhi Captain RS Meel is planning for parade of following two group:

(a) First group of Army contingent of 624 members behind an army band of 32 members.

(b) Second group of CRPF troops with 468 soldiers behind the 228 members of bikers. These two groups are to march in the same number of columns. This sequence of soldiers is followed by different states Jhanki which are showing the culture of the respective states.

(i) What is the maximum number of columns in which the army troop can march?

(a) 8 (b) 16 (c) 4 (d) 32

(ii) What is the maximum number of columns in which the CRPF troop can march?

(a)4 (b) 8 (c) 12 (d) 16

(iii) What is the maximum number of columns in which total army troop and CRPF troop together can march past?

(a) 2 (b) 4 (c) 6 (d) 8

(iv) What should be subtracted with the numbers of CRPF soldiers and the number of bikers so that their maximum number of column is equal to the maximum number of column of army troop?

(a) 4 Soldiers and 4 Bikers (b) 4 Soldiers and 2 Bikers

(c) 2 Soldiers and 4 Bikers (d) 2 Soldiers and 2 Bikers