

Q 6: Qc - Answer

Given Data

- 2 Groups of Boys and Girls

Each group consists of

$$\text{Boys} = 4$$

$$\text{Girls} = 6$$

$$\text{Girls available for such grouping} = 102$$

Required:

$$\text{Boys available for such grouping} = ?$$

Solution:

$$\begin{aligned} \text{Total members in} \\ \text{each group} &= \text{Boys} + \text{Girls} \\ &= 4 + 6 = 10 \end{aligned}$$

So it means the total members in a group = 10

Now we will find the total number of groups from the given data

Since 102 girls are available
So total groups number =

$$\frac{102}{6} = 17$$

So it means total number of groups = 17

Now Boys required for it
will be
 $4 \times 17 = \boxed{68}$

Hence 68 boys are required
for 17 groups.

Q6 Answer (d):

Given Data

Ratio of Present ages of A and B =
6:7

After 5 years ages ratio =
7:8

Required Data

Present ages of A and
B = ?

Solution

Let Present age of A = $6x$ — (i)

Present age of B = $7x$ — (ii)

Now according to the
given condition

$$6x + 5 : 7x + 5 = 7 : 8$$

Solving

$$\frac{6x + 5}{7x + 5} = \frac{7}{8}$$

$$= 8(6x + 5) = 7(7x + 5)$$

$$= 48x + 40 = 49x + 35$$

$$40 - 35 = 49x - 48x$$

$$= 5 = x \quad \text{or} \quad \boxed{x = 5}$$

Now putting the values in eq (i) and (ii)

$$A = 6x$$

$$A = 6 + 5 = 30$$

$$\boxed{A = 30}$$

and

$$B = 7x$$

$$= 7 + 5 = 35$$

$$\boxed{B = 35}$$

Hence present ages are 30 and 35.

Section - II

Q6 ANSWER

Ans (a) Given Data

3. Candidates

A Received = 15000 votes

B Received = 10000 votes

C Received = 8000 votes

Required

Percentage of total votes
of winning candidates = ?

Solution

Lets find the percentage
of Candidate A.

Formula

According to the
formula given
Percentage = $\frac{\text{Candidate A votes} + 100}{\text{Total votes}}$ (i)

$$\begin{aligned} \text{Total votes} &= \text{Votes of A} + \text{Votes of B} + \text{votes of C} \\ &= 15000 + 10000 + 8000 = 33000 \end{aligned}$$

Now putting the values in
the eq. (i) we get

$$\text{Percentage of Candidate (A)} = \frac{15000}{33000} \times 100$$

Hence percentage of votes
of Candidate $A = 45\%$ — (a)

Now finding percentage
of votes of B candidates.

$$B\text{-Percentage} = \frac{B\text{-votes}}{\text{Total votes}} \times 100$$

$$= \frac{10000}{30000} \times 100$$

$$B\text{-Percentage} = 30.3 \text{ — (b)}$$

Now finding Percentage of votes
of C-candidate.

$$C\text{-Percentage} = \frac{C\text{-votes}}{\text{Total votes}} \times 100$$

$$= \frac{8000}{33000} \times 100$$

$$C\text{-Percentage} = 24.4 \text{ — (c)}$$