

Q # 6

a)

Votes recieved by candidates =

15000, 10,000 & 8000

% of total votes of winning candidate = ?

As total votes = $15,000 + 10,000 + 8000$ $= 33,000$

and votes of winning candidate = 15000

So, by applying percentage

formula = $\frac{\text{Votes secured} \times 100}{\text{Total votes}}$

$$= \frac{15000 \times 100}{33000}$$

$$= 45.4\%$$

Ans.So % of total votes of winning candidate are 45.4%.

b)

Ratio of angles of $\Delta = 3:4:5$

each angle = ?

As total angle of $\Delta = 180^\circ$

lets consider each part of ratio,

a multiple of x , So, $3x:4x:5x$

and total angle will be equal to addition of all three parts, and common multiple is still missing

$$3x + 4x + 5x = 180$$

$$12x = 180$$

$$x = \frac{180}{12} = 15$$

Answer So, each angle would be

$$3x = 3(15) = 45^\circ$$

$$4x = 4(15) = 60^\circ$$

$$5x = 5(15) = 75^\circ$$

© • Each group consist of 4 boys and 6 girls

• no of girls = 102

• no of boys = ?

So, if there are 102 girls and each group require 6 girls then dividing 102 by 6 = $\frac{102}{6}$ = 17. Hence, girls will form 17 groups.

Boys are after required for 17 groups, and each group requires

4 boys, So boys are = 4×17
= 68.

Ans. Hence, no of boys would be 68.

①

Present ages of A & B = 6:7

After 5 years ~~A+B~~ $\frac{A+5}{B+5} = \frac{7}{8}$

Let's consider each part in ratio, a multiple of x (A common multiple which completes the ratio).

So, we come up with.

$$\frac{A}{B} = \frac{6x}{7x} \rightarrow \text{①} \quad \text{and} \quad \frac{A+5}{B+5} = \frac{7x}{8x} \rightarrow \text{②}$$

Add 5 with all parts of ratio ①

$$\frac{A+5}{B+5} = \frac{6x+5}{7x+5} \rightarrow \text{③}$$

Now, equating ② & ③ we get,

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

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

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

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

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

$$x = 5$$

So, putting it in (i)

we get,

$$\frac{A}{B} = \frac{6 \times 5}{7 \times 5} = \frac{30}{35}$$

Answer Hence, their present ages are 30 and 35

Q#8

(a)

Sum of three consecutive odd numbers = 273

the number = ?

let the numbers be $2n-1$, $2n+1$ & $2n+3$

$$\text{So, } 2n-1 + 2n+1 + 2n+3 = 273$$

$$6n + 3 = 273$$

$$(2n+1) = \frac{273}{3}$$

$$2n+1 = 91$$

$$n = \frac{91-1}{2}$$

$$n = 45$$

So, the numbers are,

(c)

Correcting the jumbled
spelling

- THRSI → THIRST
- CNDREA → GRANDE
- SCHAMOT →
- ONLNDO → LONDON
- HIODALY → HOLIDAY

old friend

(d)

let Sara = S

Ali = A

Mother = M

Then, as given

$$\bullet 6S = M \rightarrow \textcircled{1}$$

$$\bullet 2S = A \rightarrow \textcircled{II}$$

In three years their ages will be

$S+3$, $A+3$, $M+3$

& sum of their ages = $S+3 + A+3$

$$+ M+3 = 72$$

replacing A, & M with S

in given equation

$$S+3 + 2S+3 + 6S+3 = 72$$

$$9S + 9 = 72$$

$$S + 1 = \frac{72}{9}$$

$$S = 8 - 1$$

$$\boxed{S = 7}$$

Putting value of S in ① & ②

So, $6(7) = M$

$$\boxed{42 = M}$$

$$2(7) = A$$

$$\boxed{14 = A}$$

Ans. So, their ages are

$$\text{Sara} = 7$$

$$\text{Ali} = 14$$

$$\text{Mother} = 42$$