Arithmetical Reasoning

P.9 NO:- 15

1. $B - 3 = E$ $\quad B = ?$

$B + 3 = D$

$A + B = D + E + 10 \Rightarrow B + 3 + B - 3 + 10 \Rightarrow 2B + 10$

$B = C + 2 \Rightarrow C = B - 2$

$A + B + C + D + E = 133$

$\Rightarrow 2B + 10 + B - 2 + B + 3 + B - 3 = 133$

$\Rightarrow \boxed{B = 25}$

2. $B - 3 = A \Rightarrow 35 - 3 = A$ $\quad C = ?$

$D + 5 = E$

$A + C = 2E \Rightarrow 32 + C = 2 \times 30 \Rightarrow \boxed{C = 28}$

$B + D = A + C \Rightarrow B + 25 = 2 \times 30 \Rightarrow B = 35$

$A + B + C + D + E = 150$

$2E + 2E + E = 150$

$5E = 150$

$E = 30$

$\Rightarrow D = E - 5$

$= 30 - 5 = 25$

$\Rightarrow A + C = 2E$

$\boxed{C = 28}$

3. $H = M = x$

$4x + \frac{x}{2}(2) = 70$

$5x = 70$

$x = 14$

5. x → women $\frac{1}{3}$ of x → Married $\frac{1}{2}$ of ($\frac{1}{3}$ of x) → children $\frac{1}{3}$ of ($\frac{1}{2}$ of $\frac{1}{3}$ of x) → ①

x → men $\frac{2}{3}$ of x → Married $\frac{3}{4}$ of ($\frac{2}{3}$ of x) → children $\frac{2}{3}$ of ($\frac{3}{4}$ of $\frac{2}{3}$ of ... → ②

Solving eq ① and ②

$$\frac{1}{3} \times \frac{1}{2} \times \frac{1}{3} \times x = \frac{x}{18}$$

$$\frac{2}{3} \times \frac{3}{4} \times \frac{2}{3} \times x = \frac{x}{3}$$

$$\frac{x}{3} + \frac{x}{18} = \frac{7x}{18}$$

∴ Not having children $= x - \frac{7x}{18}$

$$= \frac{11}{18} x$$

6. Daughters age $= x$ years $\Rightarrow$ 23 years

Son's age $= (x+7)$ years

Father's age $= 3x$

Mother's age $= 3x - 9 \Rightarrow 3(23) - 9 \Rightarrow 60$ years

$$S = \frac{M}{2}$$

$$x + 7 = \frac{3x - 9}{2}$$

$x = 23$ years

7. Ravi's age at birth time = 0 years

Ravi's brother age = 3 years

Ravi's sister age = 4 + 3 = 7 years

Ravi's father age = 28 + 7 = 35 years − 3 = 32 years

Ravis mother age = 26 years − 3 = 23 years.

8. Rahuls age at birth time = 0 years

Rahul brother's age = 6 years

Rahul father's age = 32 + 6 = 38 years

Rahul mother's age = 38 − 3 = 35 years

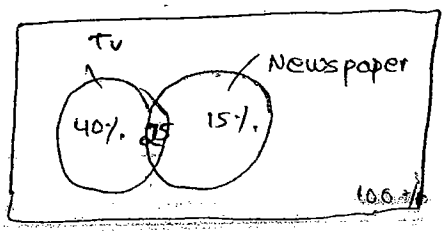
At the birth time of his sister = 25 years

∴ Rahul sister age = 10 years

S	M
25	50
10	35
5	30
0	25

9. 100% − (40 + 25 + 15)

= 20%

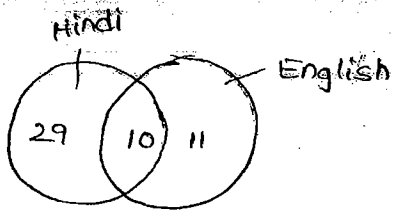


10. Total = 50 − 21 = 29

Hindi = 39

Only Hindi = 29

Only English = 11



11. Atleast two papers = 12+8+5+2

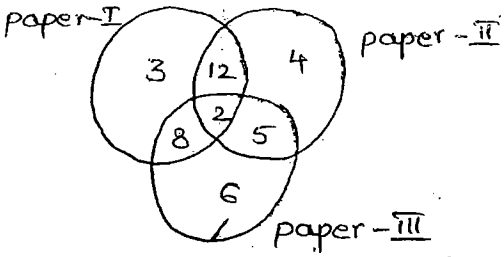
= 27

50 persons ⟶ 27

1 person ⟶ $\frac{27}{50}$

10,000 ⟶ ?

$\frac{27}{50} \times 10{,}000 = 5400$



12. All three = $\frac{5}{100} \times 120$

= 6

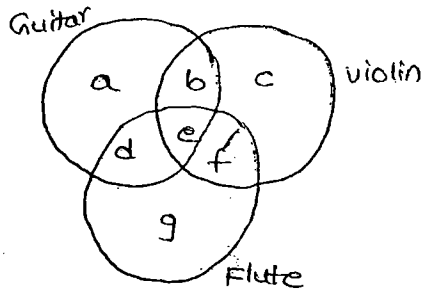
b+d+f = 30

a = 40

a+b+c+d+e+f+g = 120

40+30+6+c+g = 120

c+g = 44



13. planned to go picnic = x

Attended to picnic = x−4 ⇒ 12−4 = 8

They spend 96 Rs on eatables

$\frac{96}{x-4} - \frac{96}{x} = 4$

$96\left[\frac{x-x+4}{x(x-4)}\right] = 4$

$x^2 - 4x - 96 = 0$

$x(x-12)+8(x-12) = 0$

$x = 12, -8$

∴ 8 people attended.