

SECTION-II

Q NOS:

a. Solution:

Below 8 years of age = $20\% \times x$

number of students above 8 years =

$$2 \times 48 = 16 \times 2 = 32$$

number of students 8 years of age = 48

Total number of students = x

$$x = 48 + 32 + x \times \frac{20}{100}$$

$$x = 48 + 32 + \frac{20x}{100}$$

$$x - \frac{20x}{100} = 48 + 32$$

$$\frac{100x - 20x}{100} = 80$$

$$\frac{100x - 20x}{100} = 80$$

$$100x - 20x = 80 \times 100$$

$$80x = 8,000$$

$$x = \frac{8,000}{80}$$

$$x = 100$$

Total number of students in school = $x = 100$ answer

Q NOS. Solution:

Number of dice tossed = 2

Total outcomes when one dice is rolled = 6

Number of prime number outcomes when one dice is rolled = 3

probability that the total score is prime number = $x = ?$

	1	2	3	4	5	6
1	.	.		.		.
2	.		.		.	.
3		.		.		.
4	.		.			.
5		.				.
6	.				.	

probability of
outcome as total of
prime number = $\frac{\text{successful outcome}}{\text{possible outcomes}}$

successful outcome = total sum is of prime number = 19

possible outcome = $6 \times 6 = 36$

Probability = $\frac{19}{36}$

= $\frac{19}{36}$ answer.
 $\frac{19}{36} = 5/12$



Qnos

b: solution

$$\text{Father's age} = 3x + x$$

$$\text{son's age} = x$$

$$\text{After 8 years} = \frac{5}{2} (x + 8) -$$

Father's age

$$\text{Further 8 years} = ?$$

$$\text{Father's age}$$

$$F = 3x + x$$

$$3x + x + 8 = \frac{5}{2} (x + 8)$$

$$2(4x + 8) = 5(x + 8)$$

$$8x + 16 = 5x + 40$$

$$8x - 5x = 40 - 16$$

$$3x = 24$$

$$x = 8 \text{ years}$$

$$\begin{array}{r} 30 \\ 40 \\ 16 \\ \hline 24 \end{array}$$

$$\text{Father's age} = 3x + x + 8 + 8$$

$$= 3(8) + 8 + 8 + 8$$

$$= 24 + 8 + 8 + 8$$

$$\text{Father's age} = \boxed{48}$$

$$\begin{aligned}\text{son's age} &= x + 8 + 8 \\ &= 8 + 8 + 8\end{aligned}$$

$$\begin{aligned}\text{son's age} &= 24 \\ \text{after further} \\ &8 \text{ years}\end{aligned}$$

$$\begin{aligned}\text{Father's} &= \underline{48} \quad 2 \\ \text{age times} &24 \\ \text{of sons age}\end{aligned}$$

$$= 2 \text{ twice of his son's age after further } 8 \text{ years.}$$

Ques: d: Solution:

captain of team $C = 26$ years

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wicket keeper $= 26 + 3 = 29$ years

11 members in the team

average of 9 members $=$ total average $- 1$

$$\text{Total average} = \frac{\text{sum of ages}}{\text{Number of players}}$$

$$2 \text{ players} = 55$$

$$\begin{aligned} \text{sum of 9 members} &= 9(\text{total average} - 1) \\ &= 9(x - 1) \end{aligned}$$

$$x = \frac{55 + 9(x - 1)}{11}$$

$$11x = 55 + 9x - 9$$

$$11x - 9x = 55 - 9$$

$$2x = 46$$

$$\boxed{x = 23}$$

average age of team

Q No 7: a solution:

Two numbers = A and B

$$\frac{2}{3} \left(\frac{6 \times A}{100} + \frac{8 \times B}{100} \right) = \frac{5}{100} (A) + \frac{4}{100} (B)$$

$$\frac{2}{3} \left(\frac{6A}{100} + \frac{8B}{100} \right) = \left(\frac{5A}{100} + \frac{4B}{100} \right)$$

$$\frac{2}{3} \left(\frac{6A+8B}{100} \right) = \left(\frac{5A+4B}{100} \right)$$

$$3 \times \frac{2(6A+8B)}{3 \times 100} = \left(\frac{5A+4B}{100} \right) \times 3$$

$$100 \times \frac{12A+16B}{100} = \frac{15A+12B}{100} \times 100$$

$$12A+16B = 15A+12B$$

$$12A-15A = 12B-16B$$

$$-3A = -4B$$

$$3A = 4B$$

$$\frac{A}{B} = \frac{4}{3}$$

$$\frac{A}{B} = \frac{4}{3}$$

$$\boxed{A:B = 4:3}$$

answer

Q no 1

c. Solution

$$\text{Sum of money} = x = 5 + 2 + 4 + 3 = 14$$

$$A : B : C : D = 5 : 2 : 4 : 3$$

$$C's \text{ share} = 1000 \text{ Rs} \div D$$

$$C's \text{ share} = \frac{4}{14}$$

$$D's \text{ share} = \frac{3}{14}$$

$$C - D \text{ share} = \frac{4}{14} - \frac{3}{14}$$

$$C - D = 1$$

$$C - D = 1 \text{ difference}$$

$$1 = 1000 \text{ Rs}$$

$$B = \frac{2}{14} \rightarrow \text{share}$$

Total amount

$$B = \frac{2}{14} \times \text{Total sum of shares}$$

$$B = \frac{2}{14} \times 14$$

$$B = 2$$

$$\text{since} = 2 \times 1000 \text{ (one share)}$$

$$B = 2000$$

Q No 7

d. solution
Solution:son's present age = x

Father's age now = 38 years

Father's age at the time of his

son's birth = $38 - x$ present age of son = $x = 38 - x$

$$x = 38 - x$$

$$x = 19 \text{ years}$$

present son's age = 19 years

Five years back = $19 - 5$ $= 14 \text{ years.}$