

Q1

(a)

Prime numbers :

3 consecutive

Prime Number $\Rightarrow$

$$(x-2) + x + (x+2) = 3x$$

$$3x = 97$$

$$\frac{97}{3} = 32.3$$

Nearest Prime :

23, 29, 31, 37, 41

$$29 + 31 + 37 =$$

97

Answer $\Rightarrow$ 29, 31, 37

(b)

Uncle $\rightarrow$ Father

$\uparrow$
Daughter
 $\uparrow$

Girl $\rightarrow$ Boy



Answer : Cousin

c)

$$P(\text{Even}) = 1 - P(\text{Both odd})$$

$$\text{Even no} \Rightarrow 3$$

$$\text{odd no} \Rightarrow 3$$

$$P(\text{Both odd}) = \frac{9}{36} \left[\frac{3 \times 3}{6 \times 6} \right]$$

$$P(\text{Even}) = 1 - \frac{9}{36} = \frac{36 - 9}{36} = \frac{27}{36}$$

$$\frac{9}{12} \Rightarrow \frac{3}{4}$$

$$\text{Answer} \Rightarrow \frac{3}{4}$$

d)

$$\text{Average visitor} = \frac{\text{Total visitors}}{\text{Total days}}$$

$$\text{Sundays} \Rightarrow 5 \times 510 \Rightarrow 6000$$

$$240 \times 25 = 2550$$

$$\text{Total} \Rightarrow 6000 + 2550 \Rightarrow 8550$$

$$\text{Average} \Rightarrow \frac{8550}{30} \Rightarrow 285 \text{ Average}$$

Q 3a.

$$\frac{1}{15} + \frac{1}{20} \Rightarrow \frac{7}{60}$$

works in 4 days

$$\frac{7 \times 4}{60} \Rightarrow \frac{28}{60} \Rightarrow \frac{7}{15}$$

Remaining $\Rightarrow$

$$1 - \frac{7}{15} = \frac{15-7}{15} \Rightarrow \frac{8}{15}$$

$$\text{Answer} \Rightarrow \frac{8}{15}$$

b) 3:5

$$3x - 9 : 5x - 9$$

$$\frac{3x-9}{5x-9} \Rightarrow \frac{12}{23}$$

$$23(3x-9) \Rightarrow 12(5x-9)$$

$$69x - 207 = 60x - 108$$

$$69x - 60x = -108 + 207$$

$$9x = 99$$

$$x \Rightarrow \frac{99}{9} \Rightarrow 11 \text{ Ans.}$$

$$\boxed{11 \text{ Ans.}}$$

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c) Average $\Rightarrow$ A, B, C $\Rightarrow$ 45
 A, B $\Rightarrow$ 40

B, C $\Rightarrow$ 43

Weight of B.

A, B, C Sum $\Rightarrow$ Average $\times$ Number

$\frac{45}{3} \Rightarrow$ No $(45 \times 3) \Rightarrow 135$

Sum AB $(40 \times 2) \Rightarrow 80$

• Weight of B $\Rightarrow 135 - 80$
 $\Rightarrow 55$ Answer

d) 1, 2, 3, 6, 4, 1, 20, 6, 3, 18 $(6 \times 3 = 18)$

2) 1, 3, 9, 15, 25, 35, 49 $(25 + 10)$

3) 3, 2, 7, 10, 22, 18, 37, 26, 52 $(37 + 15)$

4) 34, 7, 37, 14, 40, 28, 43, $(28 \times 2) 56$

5) 5, 7, 11, 13, 17, 19 $(11 + 2)$