

Q NO = 1

(A)

Find the missing term

- (a) 3, 9, 21, 39, 63, 93
 (b) 1, 5, 11, 21, 37, 61
 (c) 5, 16, 29, 46, 65, 88, 117
 (d) 1, 3, 4, 9, 27, 36, 243, 729, 972

Part B

PANASONIC
 (+7)(+3)(-7)(0)(-6)(-12)(+8)(+7)(+13)
 ↓
 WINGAMCVPP

KENWOOD
 (+7)(+13)(-7)(0)(-6)(-12)(+8)
 RRGWICL

So here first letter is Seven step forward and second letter is +3 step forward, next is 7 step backward and next is 0-step and then 6 step backward and 12 step backward and next is 8 step forward and for the rest letter repeat it again.

Part C

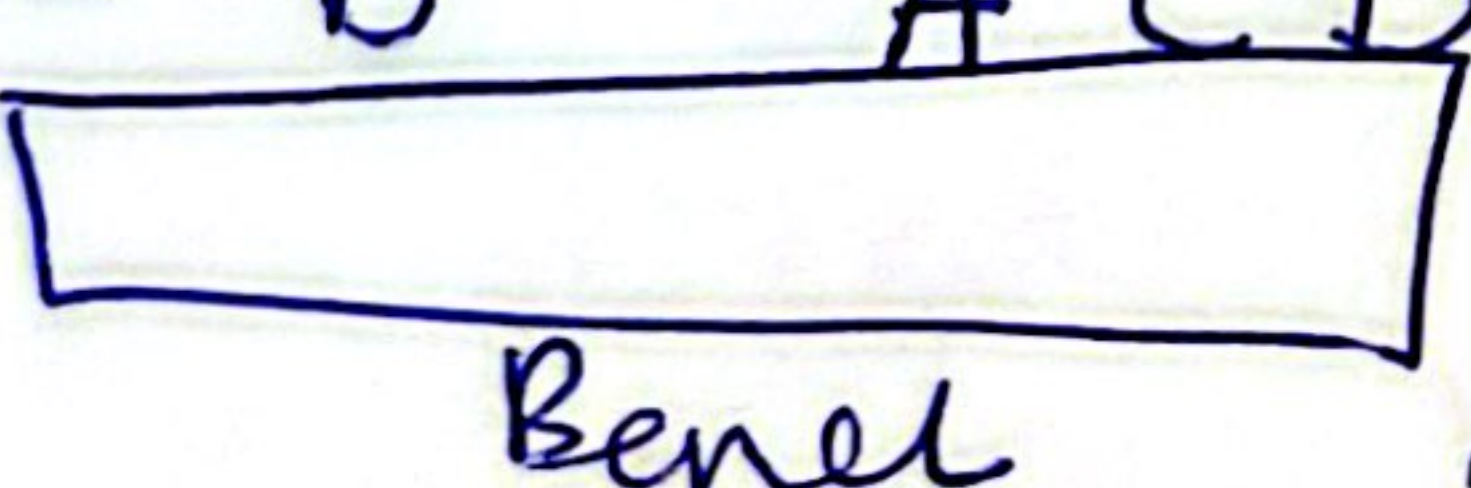
Seats Left to right

(C)

E → on left end of bench, A and C sit together
 C → 2nd from the right
 A is right to B and B

Remaining Person → D
 D is not sit with E
 Middle seat.
 So 'A' is sitting 3rd position from the left

Left Side

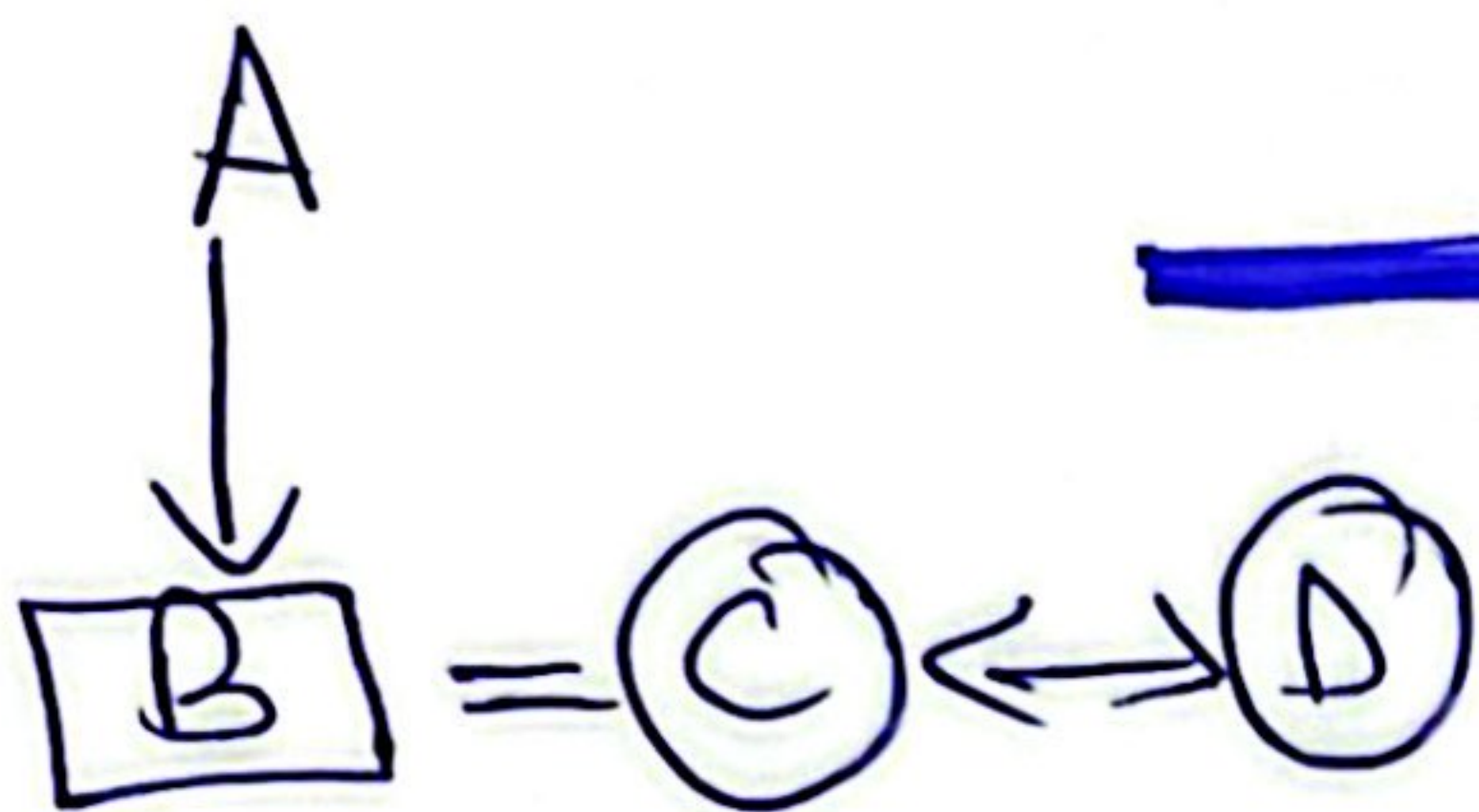


Right Side

So 'A' seat is middle and 3rd from the left side of the bench.

Part 0

D is A's daughter in law



B is son of A

C and D = are sisters

C is wife of B

D is wife of E

E and B → are brothers

So D is wife of E, E is also son of A so D is daughter in law of A's.

Q NO = 2

Part A

Let Rashid present age = x year

Father's present age = $3x$ years

After 8 years

Father's age = $3x + 8$

Rashid's age = $x + 8$

The father age would be two and half times of Rashid's age

$$3x + 8 = 2.5(x + 8)$$

8

$$3u + 8 = 2.5u + 20$$

$$3u - 2.5u = 20 - 8$$

$$\frac{0.5u}{10} = 12$$

$$\frac{5u}{10} = 12$$

$$5u = 12 \times 10$$

$$u = \frac{12 \times 10}{5} = \frac{24}{1}$$

$$u = 24$$

So Rashid current age is = 24 years
and father's age is = $3 \times 24 = 72$ years

After further 8 year (16 years from now)

$$\text{Father's age} = 72 + 16 = 88$$

$$\text{Rashid's age} = 24 + 16 = 40$$

So find Ratio:

$$\frac{\text{Father's age}}{\text{Rashid's age}} = \frac{88}{40} = 2.2$$

$$\begin{array}{r} 2.2 \\ 5 \overline{) 11} \\ \underline{10} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

After further 8 years, the father will be
 $\left(\frac{2.2}{1/5}\right)$ times of Rashid's age

Part B

→ He is 20km away from the his
standing position

→ Total Path covered

$$20 + 40 + 20 + 20 = 100 \text{ km}$$

→ Direction he is facing now = Is East

Direction of bus final position from the start $\rightarrow$ is west

Part C

Let initial men = M and women = W

~~At city~~ Given $W = \frac{1}{2}M$

After city y = men = $M - 10$ — ①

women = $W + 5$ — ②

Put W value in equation ②

$$M - 10 = \frac{1}{2}M + 5$$

$$M - \frac{1}{2}M = 5 + 10$$

$$\frac{2M - M}{2} = \frac{1}{2}M = 15$$

$$\frac{1}{2}M = 15$$

$$M = 15 \times 2 = 30$$

Then

$$W = \frac{1}{2}M$$

$$W = \frac{1}{2}(30)$$

$$W = 15$$

$$\text{Total initial passengers} = M + W = 30 + 15 = \boxed{45}$$

Part D

17 triangles in it