

Question no: 02

Part(a):

Given data:

Father's age three times more than the age of his son Rashid

let the son's age = x

Father's age is three times of his son

so, $x + 3x = 4x$

After 8 yrs, Father's age is two and a half times of Rashid's age

Father :	Son
$\frac{2}{5} (4x+8)$	$x+8$

$$4x+8 = \frac{5}{2}(x+8)$$

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

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

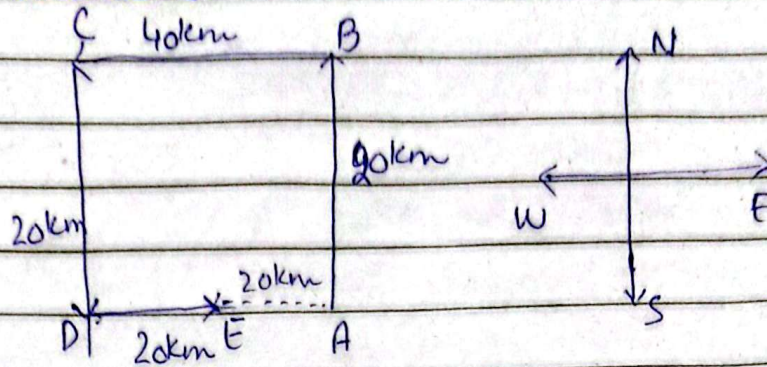
$$8x-5x = 40-16$$

$$3x = 24$$

$$x = \frac{24}{3} \Rightarrow 8$$

$$\text{Son's age} = x+8 = 8+8 = 16\text{yrs}$$

$$\begin{aligned}\text{Father's age} &= 4x+8 \\ &= 4(8+8) \\ &= 40\text{yrs}\end{aligned}$$

Part (b):

$$\begin{aligned}
 \text{i) far from starting point} \\
 &= 40\text{km} - 20\text{km} \\
 &= 20\text{km}
 \end{aligned}$$

ii) He is moving in East direction

iii) From his initial point, he was in South direction

Part (c):

In city x,

let the nbr of women be = x
and the number of men = $2x$

In city y,

Number of women = $x+5$

Number of men = $2x-10$

So,

$$2x - 10 = x + 5$$

$$2x - x = 10 + 5$$

$$x = 15$$

Number of women = 15

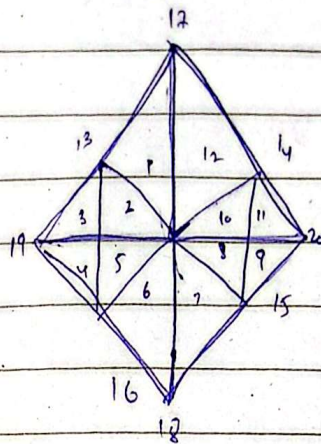
Number of men = $2(15) = 30$

$$\begin{aligned} \text{total number of passenger} &= \text{Nbr of men} + \text{Nbr of women} \\ &= 15 + 30 \end{aligned}$$

Hence, total number of passenger = 45

Part (d) :

total Number of triangle in the figure is 20.



Question no: 01

Part (a):

(i) 3, 9, 21, 39, 63, —

$\begin{array}{ccccccc} & \nearrow & \nearrow & \nearrow & \nearrow & & \\ & 6 & 12 & 18 & 24 & & \end{array}$

Pattern in this series is;

The difference of 6, 12, 18, 24 is multiples of 6, each time the next digit increased by 6, so the next difference should be;

Date: _____

M T W T F S

$$24 + 6 = 30$$

Adding 30 in 63, it results will be
 $63 + 30 = 93$

Missing number of the series is 93.

ii) 1, 5, 11, 21, 37, _____

The pattern in this difference is:

$$\begin{array}{l} 5 - 1 = 4 \quad \downarrow +2 \\ 11 - 5 = 6 \quad \downarrow +4 \\ 21 - 11 = 10 \quad \downarrow +6 \\ 37 - 21 = 16 \quad \downarrow +8 \\ \quad \quad \quad ? \quad \downarrow +8 \end{array}$$

The next to be added according to the above difference pattern will be 24.

$$37 + 24 = 61$$

Missing number of the series is 61.

iii) 5, 16, 29, 46, 65, 88, _____

Pattern in this difference is as follows:

$$\begin{array}{cccccc} 5 & 16 & 29 & 46 & 65 & 88 & \text{---} \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & & \\ +11 & +13 & +17 & +19 & +23 & & \end{array}$$

The difference of the series follows adding consecutive prime numbers of

11, 13, 17, 19, 23.

Next prime number after 23 is 29.

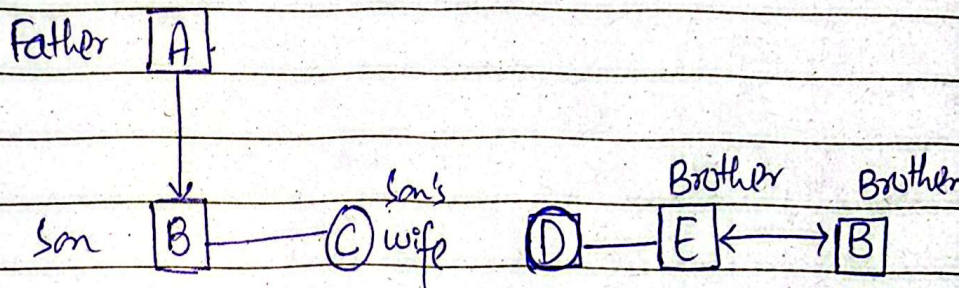
$$88 + 29 = 117$$

Missing number of the series is 117.

iv) 1, 3, 4, 9, 27, 36, 243, —, 972

$\xrightarrow{\times 3}$ $\xrightarrow{9 \times 3}$ $\xrightarrow{\times 3}$ $\xrightarrow{81}$
 $\xrightarrow{\times 3}$ $\rightarrow 12 \times 3 = 36 \times 3 = 108 \rightarrow 108 \times 3 = 324 \times 3 = 972$

Missing number of the series is 324.

Part (d):

As both C and D are sisters,
 married to B and E respectively, both
 are sons of A.

So, D will be the daughter-in-law of A.

Part (c):

Given data;

E sitting on the left end of bench;
 and C is on the second position from the
 right;

left

Right

E

C

-

C is setting next to D

E

C

D

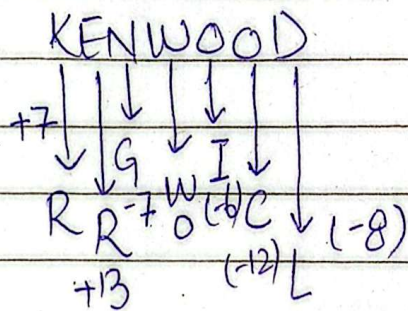
A is setting to the with the C.

E B A C D

↑

so left position will be occupied by B.

Therefore,

Final seating arrangement from left to right is **EBACD**.Part (b):

In the above sequence, K is written seven step forward (R), E is thirteen steps forward (R), N is seven step backward (G), O is six step backward (I), O is twelve step backward (C), and D is eight step backward (L).

Date: _____

M T W T F S

P A N A S O N I C

Following the above-mentioned pattern,
the coded words will be

P A N A S O N I C
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
W N G A -6 -12 (-8) ↓ ↓
M C F I C

it will be,

WNGAMCFIC.