GSA - 4.
2-2-2024
Fizza Naeem.

Question No. 1

A) - School invited - - - - - - the party?

① Number of people at the party invited by school = $x - 15 = y$

② Total attendence at the party = x

③ No. of boys at the party = a

④ No. of girls at the party = $a + 15 = b$

⑤ Ratio of boys to girls = $a : b = 4 : 5$

⑥ Find xy = ?

⇒ Since 15 girls turn the ratio up by 1 point, suppose that

$$\text{Boys} = a = 4 \times 15$$
$$a = 60 \text{ boys}$$

$$\text{Girls} = b = a + 15$$
$$b = 75 \text{ girls}$$

Total number of people at the party

$x = a + b$

$x = 60 + 75$

$x = 135$ people

Total people invited by school $= y = x - 15$

$y = x - 15$

$y = 135 - 15$

$y = 120$ people

The school invited 120 people to the party which included 60 girls and 60 boys.

B) : At F-10 signal ..... again ?

→ One signal blinks after 6 seconds.

→ Another signal blinks after 8 seconds

how long will those signals blink together again = ?

Taking least common multiple of 6 and 8.

LCM of 6 and 8 = $2 \times 2 \times 2 \times 3$

2	6	8
2	3	4
2	3	2
3	3	1
	1	1

LCM = $2^3 \times 3$

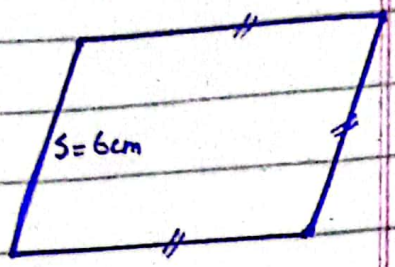
= 24

Therefore, the traffic signal at F-10 in Islamabad will blink together after 24 seconds and then continue to blink at different intervals.

C): Calculate the perimeter ..... 6cm.

Sides = S = 6cm

Perimeter of Rhombus = P = ?



$P = 4S$

$P = 4(6)$

$\boxed{P = 24cm}$

Since each side of Rhombus is equal, the Perimeter of Rhombus in given circumstances is 24cm.

D): Find the next term.

$6, \overset{+11}{\underset{}{\quad}} 17, \overset{+22}{\underset{}{\quad}} 39, \overset{+33}{\underset{}{\quad}} 72, \overset{+44}{\underset{}{\quad}} x$

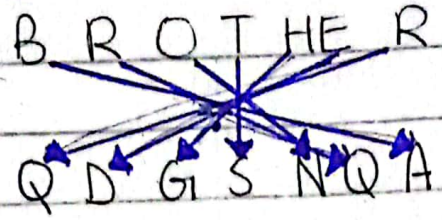
$\boxed{x = 116}$

With consecutive difference of multiples of 11, addition of 44, in the preceding number ie 72 will provide x ie 116 (72 + 44)

Question No. 2

A): In a certain code ..... code?

if



then

S I S T E R = ?

According to Alphabatical order, exchanging letters diagonally, will move one step backwards, the code for sister will be, "QDSRHR"

A ← B C D
E F G ← H
H ← I J K L
M N ← O P
Q ← R ← S ← T
U V W X
Y Z

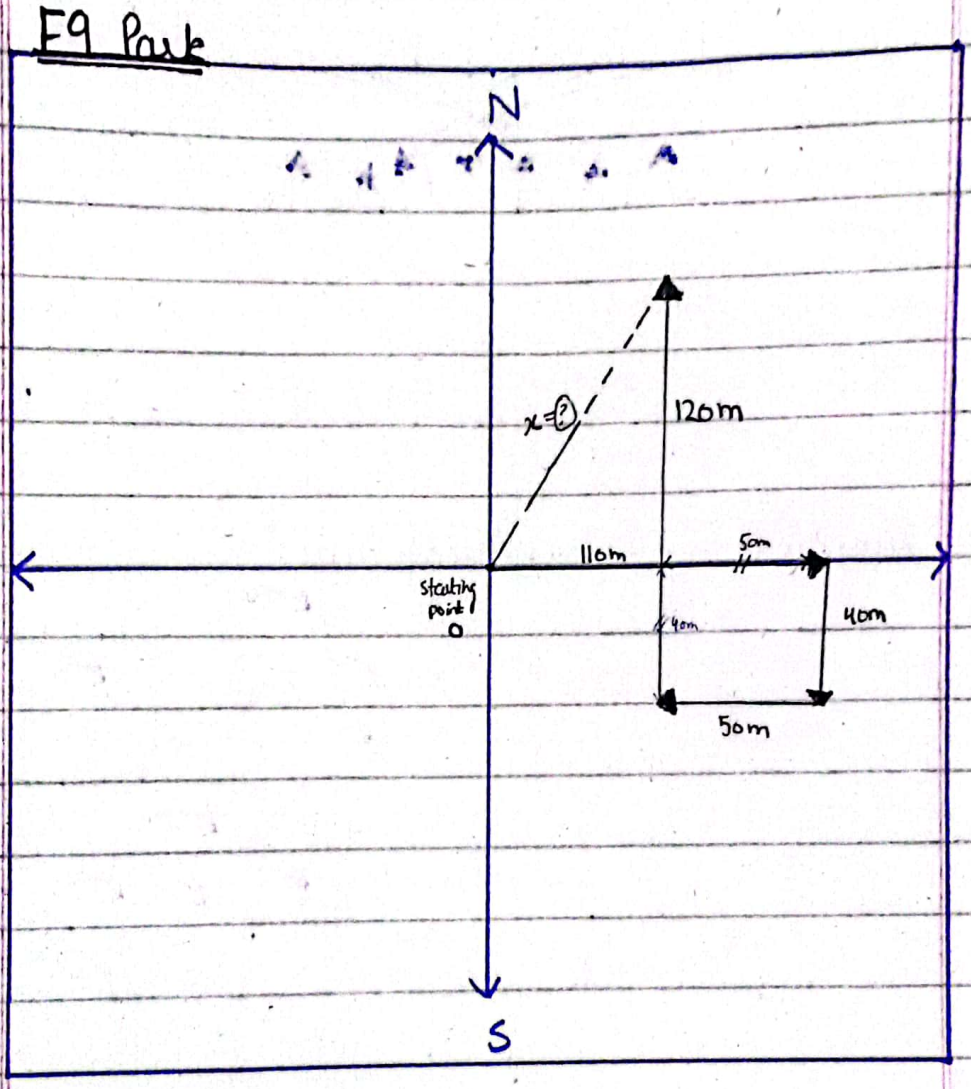
S I S T E R

=

Q D S R H R

B): For his morning ..... point?

According to the instructions



Considering that Haroon reached at a point, x away from the starting point 'O', the distance is calculated as,

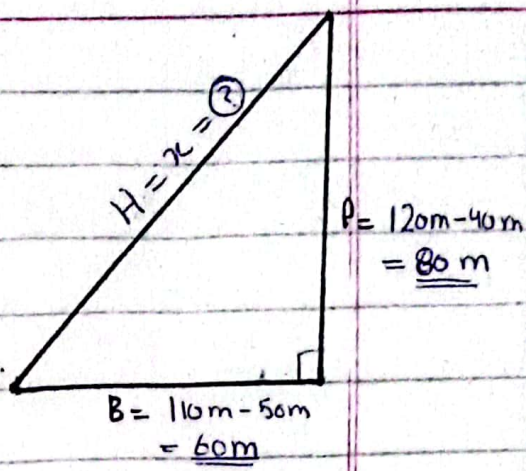
Applying Pythagorus theorum,

$$H^2 = B^2 + P^2$$

$$x^2 = (60)^2 + (80)^2$$

$$x^2 = 3600 + 6400$$

$$x^2 = 10,000$$



taking square root on both sides

$$\sqrt{x^2} = \sqrt{10,000}$$

$$\boxed{x = 100\ m}$$

Hence, Haroon is at a bench in F-9 park that is 100 m away from his starting point of his morning walk.

Proof =

$$H^2 = B^2 + P^2$$

$$(100)^2 = (60)^2 + (80)^2$$

$$10,000 = 3600 + 6400$$

$$10,000 = 10000$$

Hence Proved!

C): Read ..... as shehbaz.

① Ahmed is the heaviest in weight.

② Akbal is the lightest in weight among all.

③ Shehbaz is lighter in weight than Ahmed and Ali.

④ Shehbaz is heavier than Nasir and Akbal.

⑤ Descending order of weight in students =

Heaviest = Ahmed
Ali
Shehbaz
Nasir
Lightest = Akbal.