

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 attendance 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

Boys =  $a = 4 \times 15$   
 $a = 60$  boys

Girls =  $b = a + 15$   
 $b = 75$  girls

Total number of people at the party

$$x = a + b$$

$$x = 60 + 75$$

$$x = 135 \text{ people}$$

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

$$y = x - 15$$

$$y = 135 - 15$$

$$y = 120 \text{ people}$$

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 these signals blink together again = ?

Taking least common multiple of 6 and 8.

$$\text{LCM of } 6 \text{ and } 8 = 2 \times 2 \times 2 \times 3$$

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

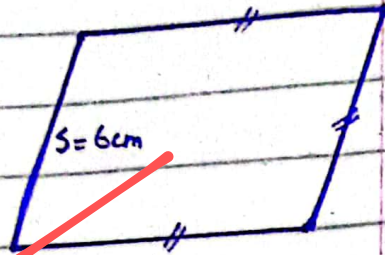
$$\begin{aligned} \text{LCM} &= 2^3 \times 3 \\ &= \underline{\underline{24}} \end{aligned}$$

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.

$$\text{Sides} = S = 6\text{cm}$$

Perimeter of  
Rhombus =  $P = ?$



$$P = 4S$$

$$P = 4(6)$$

$$P = 24\text{cm}$$

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

D): Find the next term -

6, 17, 39, 72,  $x$

$$x = 116$$

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

## Question No. 2

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

if

B R O T H E R  
Q D G S N O A

then

S I S T E R = ?

According to alphabetical order,

arranging letters diagonally, will

move one step

backwards, the

code for sister

will be, "QDSRHR"

A B C D

E F G 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

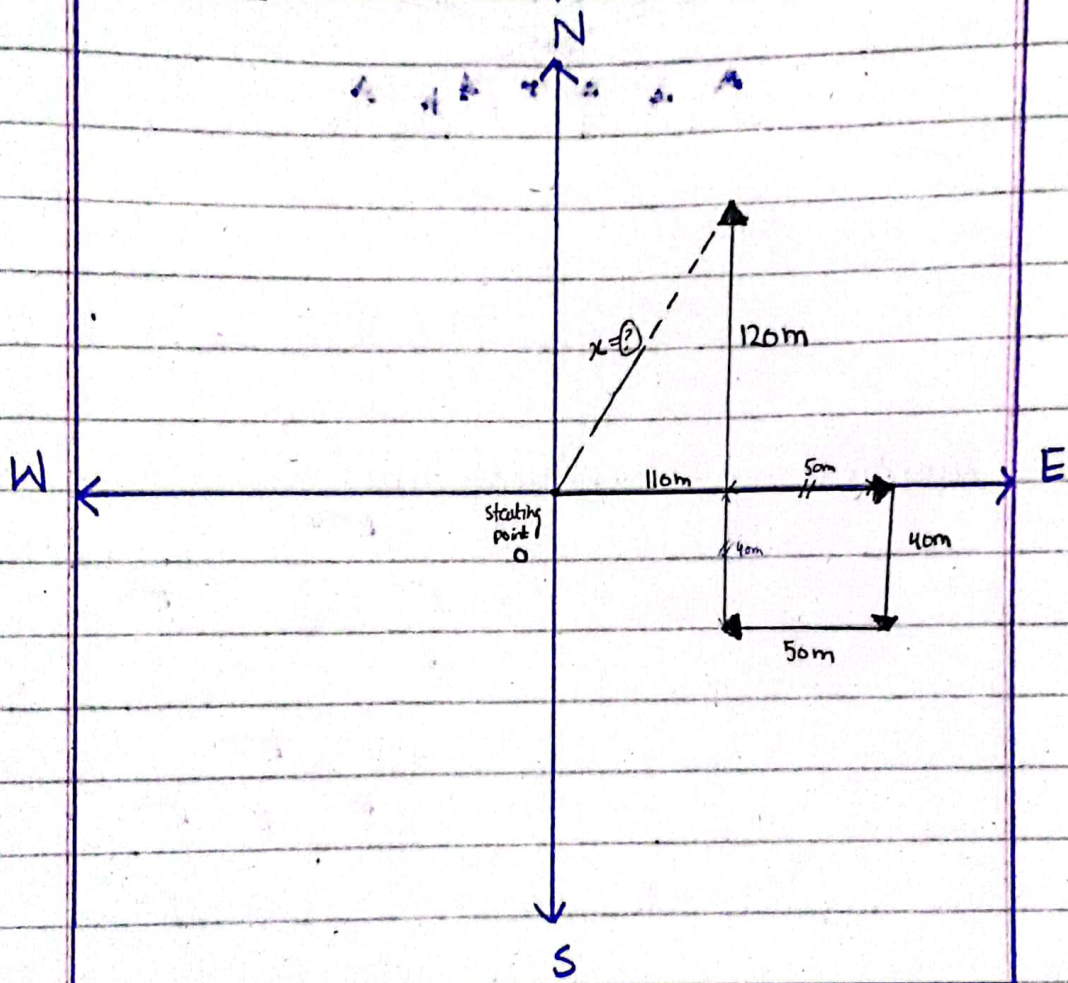
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Q D S R H R

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

According to the instructions

F9 Park



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

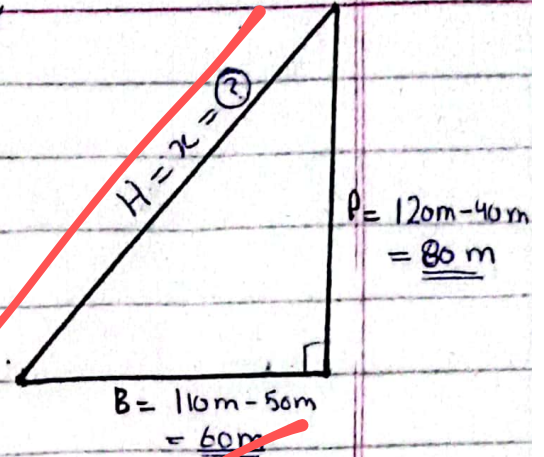
Applying Pythagoras theorem,

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

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

$$x^2 = 3600 + 6400$$

$$x^2 = 10,000$$



taking square root  
on both sides

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

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

E

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

Proof =

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

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

$$10,000 = 3600 + 6400$$

$$10,000 = 10,000$$

Hence Proved!

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

① Ahmed is the heaviest in weight

② Akbar is the lightest in weight among all.

③ Shehbaz is lighter in weight than Ahmed and Ali

④ Shehbaz is heavier than Nasir and Akbar.

⑤ Descending order of weight in students -

Heaviest = Ahmed  
Ali  
Shehbaz  
Nasir  
Lightest = Akbar.

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