

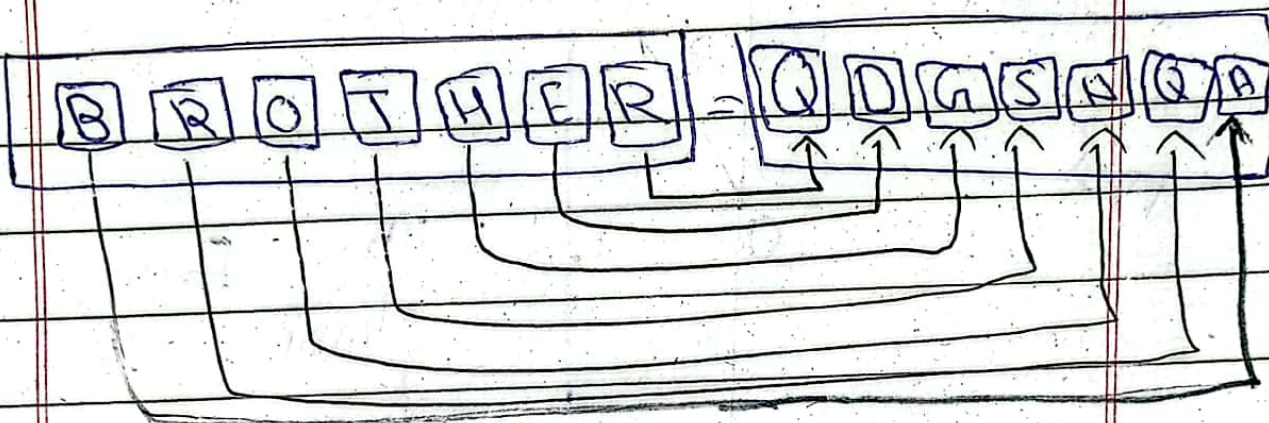
# Question 02

A.

BROTHER = QDGSNQA

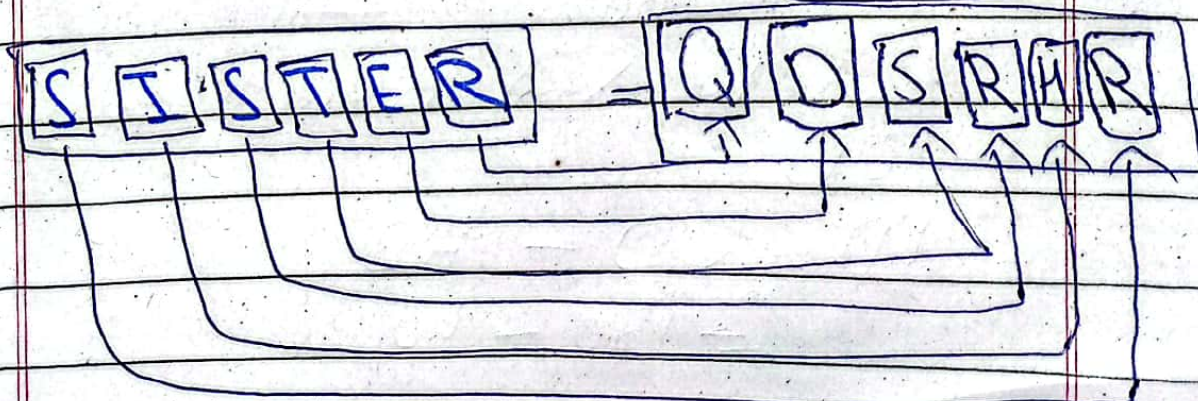
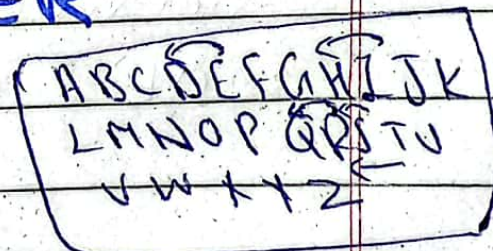
SISTER = ?

John



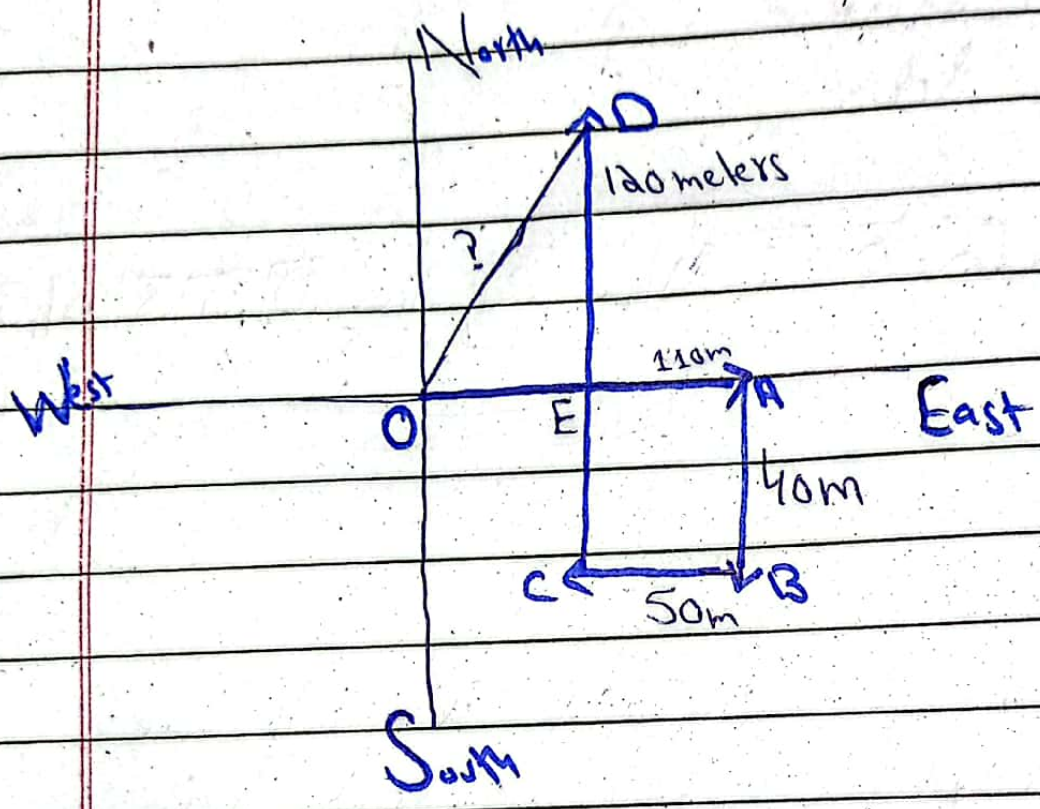
It is clear that alphabets are moving one step-backward from the left of BROTHER to

Similarly for SISTER



Hence For SISTER it  
would be  
SISTER - QDSRHR

B.  $\longleftrightarrow$



for finding OD  
first let's find OE

$$\begin{aligned}
 OE &= OA - BC \\
 &= 110 - 50 \\
 &= 60\text{m} \quad \text{--- (i)}
 \end{aligned}$$

and to find distance between  
ED

$$\begin{aligned}
 ED &= CD - AB \\
 &= 120 - 40
 \end{aligned}$$

$ED = 80\text{m}$  — (i)

Now for finding OD

$OD^2 = ED^2 + OE^2$  — (iii)

This is known as Pythagoras theorem which indicates that

$\text{Hyp}^2 = \text{Base}^2 + \text{Perpendicular}^2$

So, putting the values of (i) and (ii) in (iii)

$OD^2 = 80^2 + 60^2$

$OD^2 = 6400 + 3600$

$\Rightarrow OD = \sqrt{10000}$

$OD = 100\text{m}$

So the distance from bench to starting point is  $100\text{m}$



C.

Let the weight of Shabaz

be  $100\text{ kg}$

then according to the statement

Nasir weight =  $50\text{ kg}$

Akbar weight =  $25\text{ kg}$

Ali weigh 5 times as Akbar

So  
Ali's weight =  $5 \times 25 = 125 \text{ kg}$

Ahmed weights thrice than Ali

So  
Ahmed weight =  $125 \times 3 = 375 \text{ kg}$

Now to solve the questions

- (i) Ahmed is heaviest in weight
- (ii) Akbar is lightest in weight
- (iii) Shehbaz is lighter in weight than ~~the~~ Ahmed and Ali

(iv) Shehbaz is heavier than Nasir and Akbar

(v) Descending order of weight  
Ahmed > Ali > Shehbaz > Nasir > Akbar

### Question no.: 01

A.

School invited same no. of girls and boys

15 extra girls came

Ratio becomes  $\rightarrow$  boys to girls  
 $= 4 : 5$

Total people invited  $= ?$

Soln:

Let the total no. of people

be  $= X$

and if 15 extra girls came

then it will be

$= X + 15$

in ratio

$X : X + 15$

$\Rightarrow \frac{X}{X + 15}$

Now the ratio given is

boys to girls = 4:5  
Solving ratio

$$\frac{x}{x+15} = \frac{4}{5}$$

$$5x = 4x + 60$$

$$5x - 4x = 60$$

$$x = 60$$

and 15 more joined it so

$$60 + 15 = 75$$

$$\text{and total people} = 60 + 75 = 135$$

### c. Perimeter of Rhombus

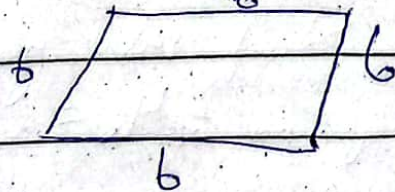
As we know that

Perimeter of Rhombus =  $4l$

as each side is equal to

6 cm

$$l = 6$$



then

$$P = 4l = 4 \times 6 = \boxed{24 \text{ cm}}$$

D. Find next term

6, 17, 39, 72, ?

Soln:

It can be seen that

$$6 + (11) = 17$$

$$17 + (22) = 39$$

$$39 + (33) = 72$$

$$72 + (44) = 116$$

The multiples of 11 are added to each term hence the

series is

6, 17, 39, 72, 116

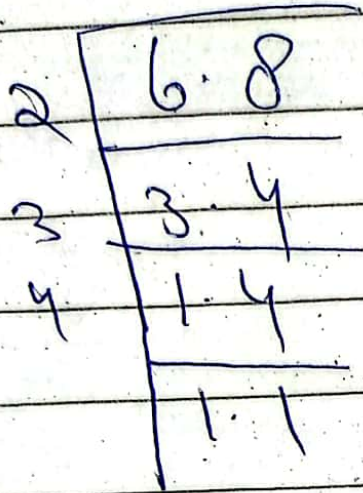
B.

One blinks after 6 seconds  
and the other after 8 seconds

After how long it will  
blink together

We need to find the  
LCM of both 6 and 8  
LCM is the least common  
factor

Least Common factor of  
6 and 8



Hence L.C.M =  $2 \times 3 \times 4$   
= 24

So the light will blink together after 24 seconds.