

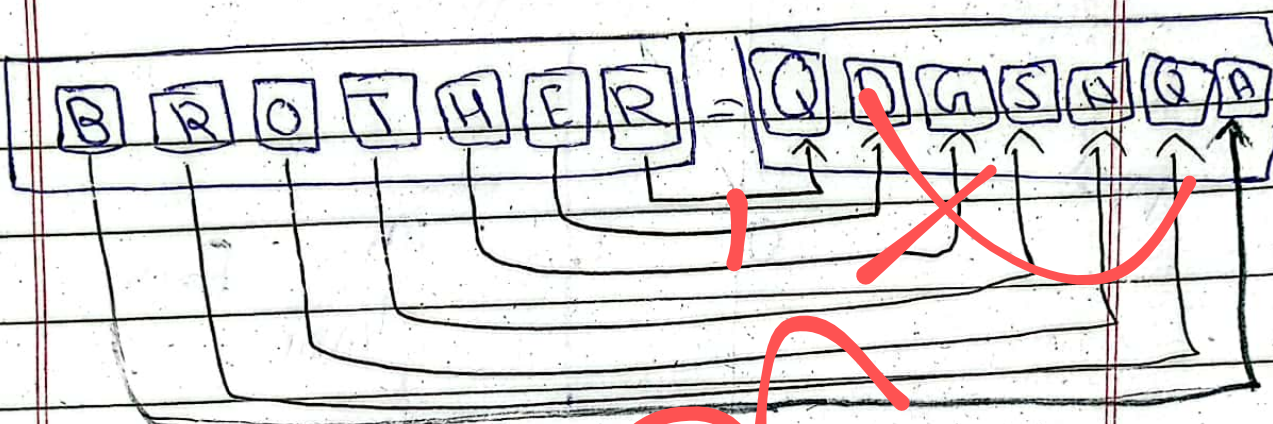
Question 02

A.

BROTHER = QDGSNQA

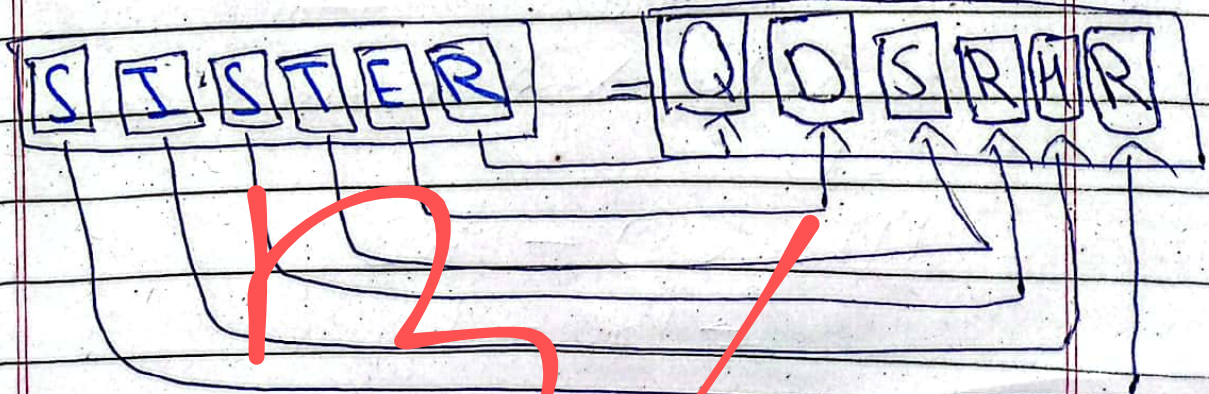
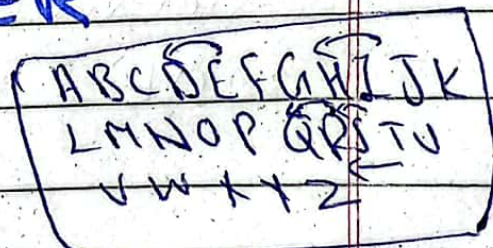
SISTER = ?

John



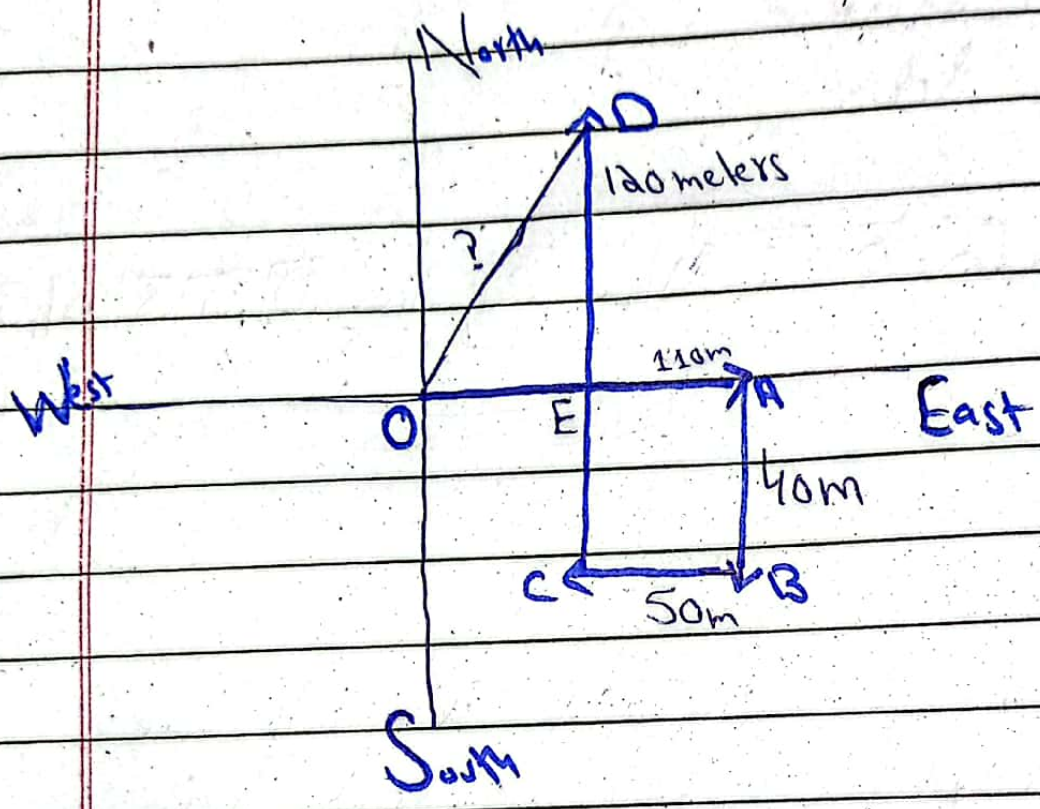
~~It is clear that alphabets are moving one step-backward from the left of BROTHER to~~

Similarly for SISTER



Hence Per 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 = 80m — (i)

Now for finding OD

OD² = ED² + OE² — (iii)

This is known as Pythagoras theorem which indicates that

Hyp² = Base² + Perpendicular²

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

OD² = 80² + 60²

OD² = 6400 + 3600

⇒ OD = √10000

OD = 100m

So the distance from bench to starting point is **100m**



C.

Let the weight of Shahbaz

be — 100 kg

then according to the statement

Nasir weight = 50 kg

Akbar weight = 25 kg

Ali weigh 5 times as Akbar

So

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

~~125 kg~~

Ahmed weights thrice than Ali

So

$$\text{Ahmed weight} = 125 \times 3$$

$$= 375 \text{ kg}$$

Now to solve the question

- (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

$$60 + 15 = 75$$

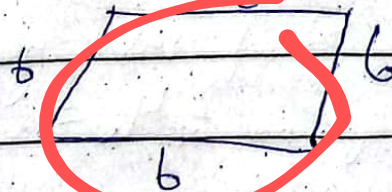
$$\text{and total people} = 60 + 75 = 135$$

c. Perimeter of Rhombus

As we know that
Perimeter of Rhombus = 4a
as each side is equal to

6 cm

a = 6



then

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

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

2	6	8
3	3	4
4	1	4
	1	1



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

So the light will blink together after 24 seconds.