TOOBA GUL BATCH: 339

GENERAL SCIENCE & ABILITY

V good for math
Work on theory portion

SECTION-II

Q. No. 6.

a-Three candidates ---

Sol:- Let the three candidates be x, y and z

Votes received by $x = 15{,}000$

Votes received by $y = 10{,}000$

Votes received by $z = 8{,}000$

Sum of votes of all three candidates = Sum of votes of x + Sum of votes of y + Sum of votes of z

$= 15000 + 10000 + 8000$

Total votes $= 33000$

Percentage of total votes of the winning candidate $= \frac{\text{Votes of winning candidate}}{\text{Total votes}} \times 100$

$= \frac{15000}{33000} \times 100$

$= \boxed{45.45\%}$

Hence, the percentage of votes of winning candidate is 45.45%.

b- The ratios - - - .

Sol: The ratio of 3 angles of triangle = 3:4:5

Let the angles be = 3x, 4x and 5x

As we know:

Sum of all angles of triangle = 180°

So, $3x + 4x + 5x = 180$

$12x = 180$

$x = \frac{180}{12}$

$x = 15$

1st Angle of $\Delta = 3(15) = 45°$

2nd angle of triangle $= 4(15) = 60°$

3rd angle of $\Delta = 5(15) = 75°$

Hence, the angles of triangle are 45°, 60°, 75°.

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c- In a sports meet, - - - .

Sol: Each group in sports meet comprises = 4 boys
= 6 girls

Total number of girls available for groups = 102 girls

Total Number of boys = ?

If each ~~girl~~ group consists of 6 girls with total girls 102 then = $\frac{102}{6}$

Number of groups = 17 groups

Now, if there are 17 groups and each group contains 4 boys, the number of boys required = 17 × 4 = 68 boys.

~~Therefore~~ ∴ 68 boys are required against 102 girls.

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d.

The ratio of present ages.---

Sol: Let the present ages of A and B be $6x$ and $7x$ respectively.

After 5-years the ratio would become 7:8 as represented:

$$6x+5 : 7x+5 = 7:8$$

$$\frac{6x+5}{7x+5} = \frac{7}{8}$$

According to given condition

$$(6x+5)8 = 7(7x+5)$$

$$48x+40 = 49x+35$$

$$48x-49x = 35-40$$

$$-x = -5$$

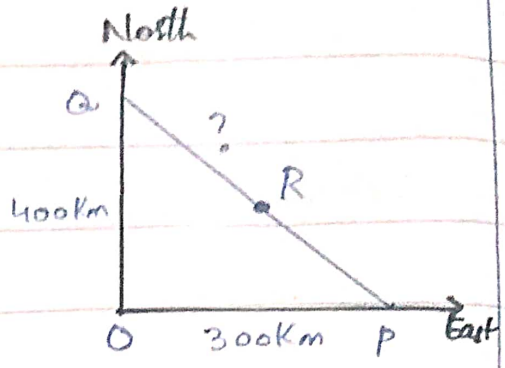
$$x = 5$$

So, the present age of A $= 6x = 6(5) = 30$ years

present age of B $= 7x = 7(5) = 35$ years.

Q. No. 7

a. In the given fig ---



Sol:-

According to the figure;

Distance between P and O = 300Km

Distance between Q and Q = 400Km

Distance between Q and R = ?

According to Pythagoras theorem

$(\text{Hypotenuse})^2 = (\text{Base})^2 + (\text{Perpendicular})^2$

$h^2 = B^2 + P^2$

$(PQ)^2 = (OP)^2 + (OQ)^2$

$(PQ)^2 = (300)^2 + (400)^2$

$PQ^2 = 90,000 + 160,000$

$PQ^2 = 250,000$

$\therefore$ Taking $\sqrt{\ }$ on both sides

$\sqrt{PQ^2} = \sqrt{250,000}$

$PQ = 50,000$ Km

Now, in order to find the distance between Q and R, divide PQ with 2

$$QR = \frac{50,000}{2}$$

$QR = 250$ Km

Hence the distance between Q and R is 250 Km.

b-

Find the angles ---

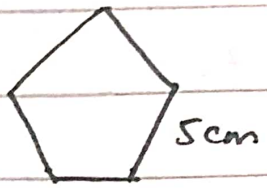
Sol:

PENTAGON is a geometrical figure with 5 sides and 5 angles assanged in segulas polygon.

Accosding to the statement

Each side of Pentagon = 5cm

Angles of pesimetes of pentagon = ?



Pentagon

As all sides and angles of pentagon ase equal so pesimetes of sigle side is equal to each side.

Pesimetes of Pentagon = 5a

= 5 x side length

= 5 x 5

∴ Angle of pesimetes of pentagon = 25cm

segulas

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c- How IQ ---

Sol: Mental age of a pesson = 11 years

Pesson's actual age = 9 years

IQ = ?

$$IQ = \frac{\text{Mental age}}{\text{Actual age}} \times 100$$

$= \frac{11}{9} \times 100$

IQ = 122.2

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d-

The average ---

Sol:-

Average age of boys = 15 years

Let the boys be A, B, C = $3x, 5x, 7x$

Age of the youngest boy = ?

In order to find the age of youngest boy apply average formula:

$$\text{Average} = \frac{\text{Sum of all observations}}{\text{No. of observations}}$$

$$15 = \frac{3x + 5x + 7x}{3}$$

$$15 = \frac{15x}{3}$$

$$\frac{15 \times 3}{15} = x$$

$x = 3$

Age of youngest boy $= 3x = 3(3)$

$= 9$ years

SECTION-I

Q.No.3

d.

Distinguish between RAM and ROM of computers.

RAM	ROM
1. A form of data storage that can be accessed at any time, in any order or form and from any physical location.	A form of data storage that cannot be easily altered or reprogrammed.
2. RAM stands for Random Access Memory.	ROM stands for Read Only Memory.
3. It is a volatile memory.	It is a non-volatile memory.
4. It is a read-write memory.	It is a read-only memory.
5. It is faster.	It is slower.
6. It is used in the normal operations of a computer.	It is used primarily in the startup process of computers.

Q.No.4

C.

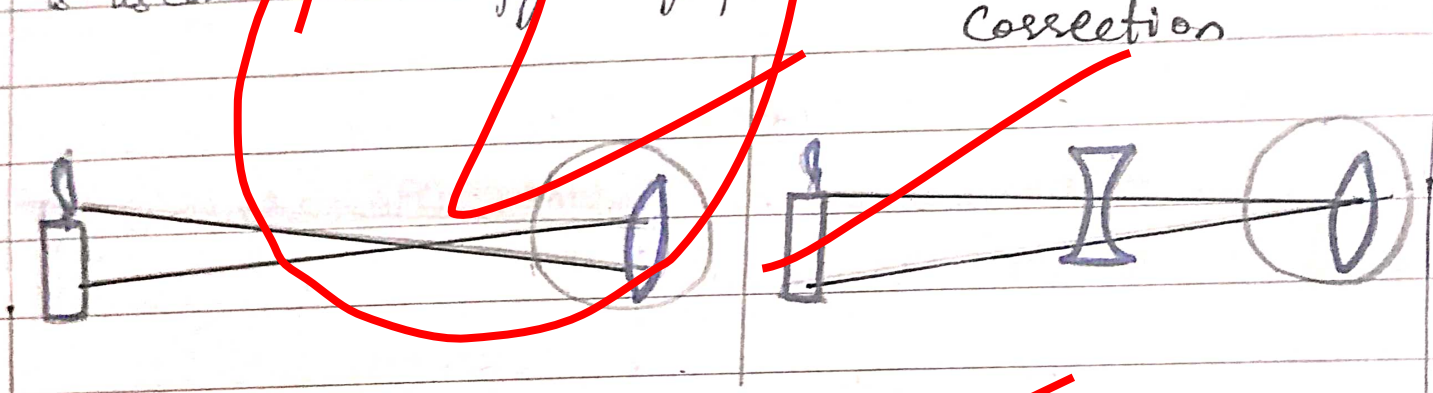
What is Myopia and Hyper——

DISEASES OF EYE:

Human eye is a sensory organ. It is responsible for vision. However, any fault in eye-sight leads to eye diseases such as myopia and hypermetropia.

a- Myopia:

The elongation of eye-ball is called Myopia. It is the condition in which image of objects is formed in front of retina. Concave lens is used to rectify myopia.



b- Hypermetropia:

It is the condition in which eye-ball shortens than the original. Image of distant objects is formed behind retina. It can be corrected through convex lens.