DATE: 17/01/2025 Friday

31

GK-04

Hamna Noor

QUESTION - 01

A.

Find missing terms :

1. 2, 3, 6, 4, 5, 20, 6, 3, 18

2. 1, 3, 9, 15, 25, 34, 49

3. 2, 7, 10, 22, 18, 37, 26, 48

4. 34, 7, 37, 14, 40, 28, 43, 56

5. 5, 7, 11, 13, 17, 19

B.

Ratio

Given :

Two numbers in ratio of 2 : 3.

Product of LCM HCF := 294

Making equation from the given,

$2x : 3x = LCM \times HCF$

$= 294$

$(2x) \times (3x) = 294$

$6x^2 = 294$

To Find :

Find the numbers = ?

Using the original equation,

$6x^2 = 294$

$x^2 = \frac{294}{6}$

$x^2 = 49$

Taking root on both sides,

$\sqrt{x^2} = \sqrt{49}$

$x = 7$

The number is 7.

Now using it with ratios,

$2x = 2(7) = 14$

$3x = 3(7) = 21$

Thus, the numbers are 14, 21

C.

Number of Bricks

Given:

thickness of brick = 25cm x 11.25cm x 6cm

= 1687.5 cm^3

volume of wall = 8m x 6m x 22.5cm

Converting into cm,

= 800cm x 600cm x 22.5cm

= 10,800,000 cm^3

To Find :

Number of bricks = ?

Solution :

Number of bricks = ?

Using a formula,

$$\text{Number of bricks} = \frac{\text{Volume of wall}}{\text{Volume of brick}}$$

putting values in formula,

$$\text{Number of bricks} = \frac{10,800,000\ \text{cm}^3}{1687.5\ \text{cm}^3}$$

$$= \frac{10,800,000 \times 10}{16875}$$

$$= \frac{21600000}{3575}$$

$$= \frac{4320000}{715}$$

$$= 64,000$$

Thus, to build a wall, 64,000 bricks will be needed.

D.

Numbers

Given Data :

greater of numbers = $2x$

lesser of number = x

Sum of numbers = 96

To Find :

Numbers = ?

Solution :

$$2x + x = 96$$

$$3x = 96$$

$$x = \frac{96}{3}$$

$$x = 32$$

The lesser number = 32

The greater number = 2 (32)

= 64

Hence, the two numbers are

64 , 32

QUESTION - 03

A.

Ratio of Investments

Given :

Three partners shared a profit = 5 : 7 : 8

Time period of partnership = 14 : 8 : 7

To Find :

Ratio of investments = ?

Solution :

Using the relevant formula,

Profit = Time × Investment

Setting the formula accordingly,

$$\text{Investment} = \frac{\text{Profit}}{\text{Time}}$$

$$I_1 = \frac{P_1}{T_1}$$

$$= \frac{5}{14} \times \frac{7}{8} \times \frac{8}{7}$$

$$= \frac{5}{14}$$

DATE: __/__/____

$$\frac{I_1}{I_2} = \frac{5}{7} \times \frac{8}{14}$$

$$= \frac{40}{98}$$

$$\frac{I_1}{I_2} = \frac{20}{49}$$

$$\frac{I_2}{I_3} = \frac{7}{8} \times \frac{7}{8}$$

$$= \frac{49}{64}$$

$$\frac{I_2}{I_3} = \frac{49}{64}$$

Thus, ratios of investments,

40 : 49 : 64

B.

Numbers

Given :

average of 3 consecutive = 91

To Find :

number = ?

Solution :

From the given statement,

$= x, x+2, x-2$

Average $= 91$

Using the formula,

$$\text{average} = \frac{\text{sum of values}}{\text{total number}}$$

$$91 = \frac{(x+2)+x+x-2}{3}$$

$$91 \cdot 3 = 3x$$

$$273 = 3x$$

$$x = \frac{273}{3}$$

$$x = 91$$

Substituting values,

$\Rightarrow x+2 = 91+2 = 93$

$\Rightarrow x-2 = 91-2 = 89$

Thus, the numbers are

89, 91, 93

C.

Ratio of Numbers

P.T.O

Let the first number be x

" second " " y

According to the statement,

$$40\% = \frac{2}{3}$$

$$0.4x = \frac{2}{3}y$$

$$\frac{x}{y} = \frac{2}{3} \times 0.4$$

$$\frac{x}{y} = \frac{2}{3} \div \frac{2}{5}$$

$$\frac{x}{y} = \frac{2}{3} \times \frac{5}{2}$$

$$\frac{x}{y} = \frac{5}{3}$$

The ratio of first number to the second is 5 : 3

D.

HEIGHT :

Given :

distrance from source to light = 4m

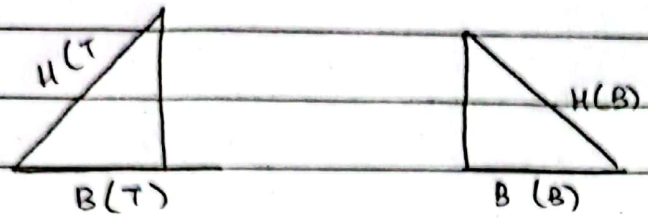
" " tree to building = 6m

height of building = 50m

To find :

height of tree = ?

DATE : __/__/____



The total distance = 4m + 6m

= 10m²

height of building = 50m

= $\frac{50}{10}$ = 5m