

TEST-04Q NO 1:

(A)

1) $2, 3, 6, 4, 5, 20, \text{---}, 3, 18$

$$2 \times 3 = 6$$

$$4 \times 5 = 20$$

So,

$$6 \times 3 = 18$$

$$2, 3, 6, 4, 5, 20, \underline{6}, 3, 18$$

Answer = 6

2) $1, 3, 9, 15, 25, \text{---}, 49$

There are two series in this question

$$1, 3, 9, 15, 25, \text{---}, 49$$

First series:

$$1 + 8 = 9$$

$$9 + 16 = 25$$

$$25 + 24 = 49$$

Second series:

$$7 + 15 = 22$$

$$22 + 15 = 37$$

$$37 + 15 = 52$$

1, 3, 9, 15, 25, 52, 49

Answer = 52

3) 2, 7, 10, 22, 18, 37, 26, _____

These are two series in this question

2) 1, 3, 9, 15, 25, _____, 49

These are two series in this question

1, 3, 9, 15, 25, _____, 49

First series:

$$1 + 8 = 9$$

$$9 + 16 = 25$$

$$25 + 24 = 49$$

second series =

$$3 + 12 = 15$$

$$15 + 24 = 39$$

1, 3, 9, 15, 25, 39, 49

Answer = 39

3) 2, 7, 10, 22, 18, 37, 26, —

There are two series in this question.

2, 7, 10, 22, 18, 37, 26, —

First series

$$2 + 8 = 10$$

$$10 + 8 = 18$$

$$18 + 8 = 26$$

second series

$$7 + 15 = 22$$

$$22 + 15 = 37$$

$$37 + 15 = 52$$

2, 7, 10, 22, 18, 37, 26, 52

Answer = 52

4) 34, 7, 37, 14, 40, 28, 43, —

There are two series in this question.

34, 7, 37, 14, 40, 28, 43, —

First series

$$34 + 3 = 37$$

$$37 + 3 = 40$$

$$40 + 3 = 43$$

Second series

$$7 + 7 = 14$$

$$14 + 14 = 28$$

$$28 + 28 = 56$$

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

Answer = 56

5) 5, 7, 11, ———, 17, 19

There is only one series in this question.

5, 7, 11, 13, 17, 19

Answer = 13

(B)

Two numbers are in ratio = 2:3

Product of their LCM \times HCF = 294

Find the numbers = ?

Let the ratio be

$2x, 3x$

Product of two numbers = $2x \times 3x$
= $6x^2$

Formula

Product of two numbers = LCM \times HCF

$$6x^2 = 294$$

$$x^2 = \frac{294}{6} = 49$$

$$x^2 = 49$$

By taking square roots

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

$$x = 7$$

Find the numbers

$$2x = 2 \times 7$$

$$= 14$$

$$3x = 3 \times 7$$

$$= 21$$

The numbers are = 14, 21

Answer = 14, 21

(C)

Firstly convert all the units in one dimension to solve the question

$$\text{Wall length} = 8\text{m}$$

$$= 8 \times 100$$

$$= 800\text{ cm}$$

$$\text{Wall width} = 6\text{m}$$

$$= 6 \times 100$$

$$= 600\text{ cm}$$

$$\text{Height of wall} = 22.5$$

$$\begin{aligned}\text{Volume of the wall} &= \text{width} \times \text{Height} \times \text{length} \\ &= 600 \times 22.5 \times 800\end{aligned}$$

$$\boxed{\text{Volume} = 10,800,000 \text{ cm}^3}$$

Now,

$$\begin{aligned}\text{Volume of one brick} &= \text{width} \times \text{Height} \times \text{length} \\ &= 25 \times 6 \times 11.25\end{aligned}$$

$$\boxed{\text{Volume} = 1687.5 \text{ cm}^3}$$

Now, let's calculate the number of bricks required

$$\begin{aligned}\text{Number of Bricks} &= \frac{\text{Volume of wall}}{\text{volume of one brick}}\end{aligned}$$

$$= \frac{10,800,000}{1687.5}$$

$$= 6400$$

$$\boxed{\text{Number of bricks} = 6400 \text{ cm}^3}$$

$$\boxed{\text{Answer} = 6400}$$

(D)

Let the less number be = x Greater number = $2x$

Sum of numbers = 96

$$x + 2x = 96$$

$$3x = 96$$

Dividing 3 on both sides

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

$$x = 32$$

The greater number = $2x$

$$= 2 \times 32$$

$$= 64$$

$$\boxed{\text{Numbers} = 32, 64}$$

$$\boxed{\text{Answer} = 32, 64}$$

Date: _____
QNO3 :

(A)

$$\text{Profit ratio} = 5 : 7 : 8$$

$$\text{Investment} = 14, 8, 7$$

$$\text{Ratio of investment} = ?$$

$$\text{Ratio of investment} = \frac{\text{Profit}}{\text{Time}}$$

$$\text{Ratio of investment} = \frac{5}{14} : \frac{7}{8} : \frac{8}{7}$$

By taking LCM

$$\frac{5}{14} \times \frac{4}{4} : \frac{7}{8} \times \frac{7}{7} : 8 : \frac{56}{8}$$

$$20 : 49 : 64$$

$$\text{Ratio of investment} = 20 : 49 : 64$$

Answer = 20 : 49 : 64

(B)

Average of three consecutive
numbers = 91

Numbers = ?

Let the three numbers be

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

Average of numbers = 91

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

$$\frac{3x}{3} = 91$$

$$x = 91$$

Numbers

$$x-2 = 91-2$$

$$= 89$$

$$x = 91$$

$$x+2 = 91+2$$

$$= 93$$

Numbers = 89, 91, 93

Answer = 89, 91, 93

(C)

Let the first number be = x

Let the second number be = y

As per equation

40% of x equals to $\frac{2}{3}$ of y .

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

By ~~div~~ multiplying with 10 on both sides

$$0.4 \times 10x = \frac{2}{3} \times 10y$$

$$4x = \frac{20}{3}y$$

$$4x \times 3 = 20y$$

$$12x = 20y$$

Dividing by 4 on both sides

Day:

Date:

$$\frac{3x}{4} = \frac{5y}{4}$$

$$3x = 5y$$

$$x : y = 5 : 3$$

Answer = 5:3
