

# GSA-Test 4

## QNO1

A)

$$6 \div 3 = 2, 20 \div 5 = 4, 18 \div 3 = 6$$

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

$$1^2, 2^2-1, 3^2, 4^2-1, 5^2, 6^2-1, 7^2$$

$$2) 1, 3, 9, 15, 25, \underline{35}, 49$$

$$5) 5, 7, 11, \underline{13}, 17, 19 \therefore \text{set of prime numbers}$$

3)

4)

B)

The numbers are 14 and 21.

$$\begin{array}{r|l} 2 & 214 \\ \hline 3 & 147 \\ \hline 7 & 49 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 14 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 3 & 21 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

$$7 \times 2 = 14$$

$$7 \times 3 = 21$$

$$14:21 = 2:3$$

$$\text{L.C.M} = 2 \times 3 \Rightarrow 6$$

$$\text{H.C.F} = 7 \times 7 \Rightarrow 49$$

$$\Rightarrow 49 \times 6 = 294$$

C)

$$\text{Volume of brick} = 25 \text{ cm} \times 11.25 \text{ cm} \times 6 \text{ cm}$$

$$= 150 \text{ cm}^2 \times 11.25 \text{ cm}$$

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

$$\begin{array}{r} 150 \\ \times 11 \\ \hline 1650 \\ + 37.5 \\ \hline 1687.5 \end{array}$$

$$\times \text{ Volume of the wall} = 800 \text{ cm} \times 600 \text{ cm} \times 22.5 \text{ cm}$$

$$= 480000 \text{ cm}^2 \times 22.5 \text{ cm}$$

=

$$\text{volume of Brick} = 1687.5 \text{ cm}^3 \Rightarrow 1.6875 \text{ m}^3$$

$$\text{volume of wall} = 8 \text{ m} \times 6 \text{ m} \times 0.225 \text{ m}$$

$$\Rightarrow 48 \text{ m}^2 \times 0.225 \text{ m}$$

$$\Rightarrow 10.8 \text{ m}^3$$

$$\begin{array}{r} 48 \\ \times 0.225 \\ \hline 1800 \\ 9000 \\ \hline 10800 \end{array}$$

$$\text{How many bricks} \Rightarrow \frac{10.8 \text{ m}^3}{1.6875 \text{ m}^3} \Rightarrow 6 \text{ bricks}$$



## Q2

A)

1) 60 litres milk

2) milk and water = 2:1

3) This mean = 40:20

∴ Milk is 40 and water is 20

∴ To convert it into 1:2

$$= 40:20 + 60$$

$$= 40:80$$

$$= 1:2$$

60 litres of water is needed to be added.

B)

$$F - 10 = 3S \quad \text{Past}$$

$$X \quad F + 10 = 2S \quad \text{Future}$$

Present ratio = ?

$$F - 10 = 3(S - 10) \quad \dots (i)$$

$$F + 10 = 2(S + 10) \quad \dots (ii)$$

$$i) \quad F - 10 = 3S - 30$$

$$F = 3S - 20 \quad \dots (iii)$$

$$ii) \quad F + 10 = 2S + 20$$

$$F = 2S + 10 \quad \dots (iv)$$

Comparing both

$$F = 3S - 20$$

$$\frac{-F = -2S - 10}{0 = S - 30}$$

$$\Rightarrow \boxed{S = 30}$$

$$\begin{array}{r} 10 \quad 20 \\ 0 \quad 30 \quad 10 \end{array}$$

$$\textcircled{2} \quad 50 \quad 30$$

Putting  $S=30$  in equation (iii)

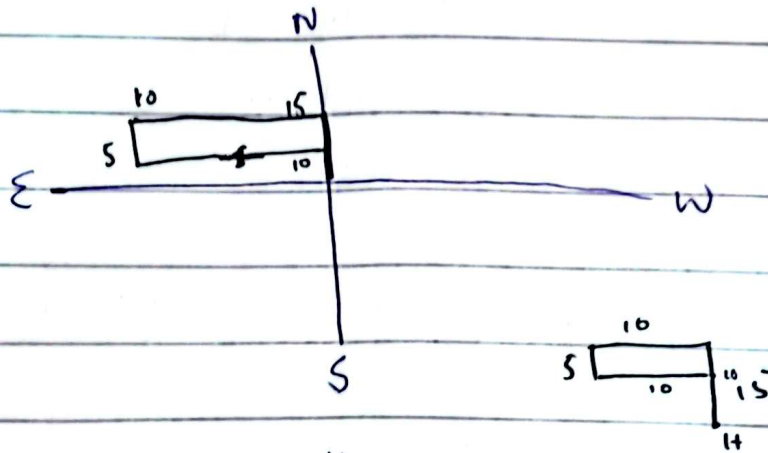
$$F = 3S - 20$$

$$F = 3(30) - 20$$

$$F = 90 - 20$$

$$F = 70$$

(c)



1) He is in north

2) He is 10 km far from house

3) He travelled  $15 + 10 + 5 + 10 = 40$  km

(d)

→ Speed of trains 7:8.

→ second is covering 100 km in 4 hours means 100 km/h

→ if  $100 = 8x$

→ means  $x = \frac{100}{8} \Rightarrow 12.5$

→ Then  $7x = 7(12.5) \Rightarrow 87.5 \text{ km/h}$