GSA - Test 4

28

QNo 1

A)

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

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

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

3

2) 1, 3, 9, 15, 25, 35, 49

5) 5, 7, 11, 13, 17, 19 ∴ Set of prime numbers

3)

4)

B)

The numbers are 14 and 21.

2	294
3	147
7	49
7	7
	1

2	14
7	7
	1

3	21
7	7
	1

7x2 = 14

7x3 = 21

14:21 = 2:3

L.C.M = 2x3 ⇒ 6

H.C.F = 7x7 ⇒ 49

⇒ 49 x 6 = 294

C)

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

= 150 cm^2 x 11.25cm

= 1687.5 cm^3

150
11
1650
+37.5
1687.5

Volume of the wall = 800 cm x 600 cm x 22.5cm

= 480000 cm^2 x 22.5cm

=

Volume of Brick = 1687.5 cm^3 ⇒ 1.6875 m^3

Volume of Wall = 8m x 6m x 0.225m

⇒ 48 m^2 x 0.225 m

⇒ 10.8 m^3

How many brick ⇒ $\frac{10.8\ m^3}{1.6875\ m^3}$ ⇒ 6 bricks

48
0.225
48
1800
900x
10.800

Q2

A)

1) 60 litres milk

2) milk ad water = 2:1

3) This mean = 40:20

∴ Milk is 40 ad water is 20

∴ To convert it into 1:2

= 40:20 + 60

= 40:80

= 1:2

60 litres of water is needed to be add.

B)

F - 10 = 3S past

F + 10 = 2S future

Present value = ?

F - 10 = 3(S - 10) ...(i)

F + 10 = 2(S + 10) ...(ii)

i) F - 10 = 3S - 30

F = 3S - 20 ...(iii)

ii) F + 10 = 2S + 20

F = 2S + 10 ...(iv)

Comparing both

F = 3S - 20

-F = -2S - 10

0 = S - 30

⇒ S = 30

Putting $S = 30$ in eqution (iii)

$F = 3S - 20$

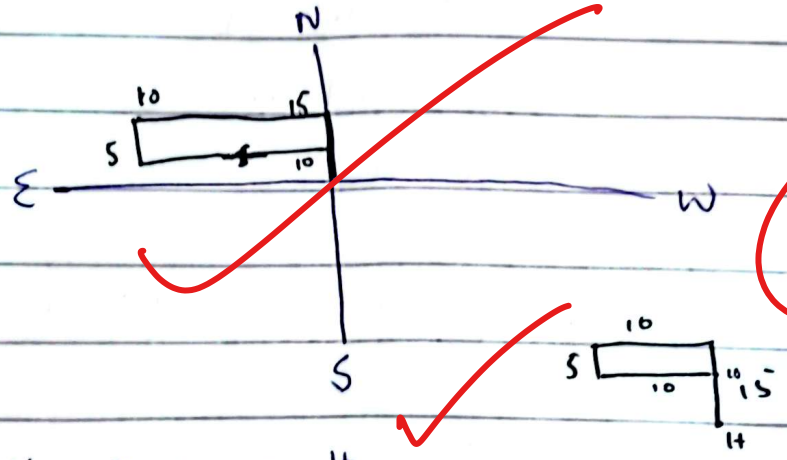
$F = 3(30) - 20$

$F = 90 - 20$

$\boxed{F = 70.}$

Ratio = 7 : 3

(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 400km in 4 hours means 100km/h

→ if $100 = 8x$

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

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