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Question # 1 ✓ (A)

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

The missing number could be 6

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

Missing term is 35

3. 2, 7, 10, 22, 18, 37, 26, ✗

4

4. 34, 7, 37, 14, 40, 28, 43 56 ✓

Missing term is 56

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

Missing term is 13

(B)

b Two Numbers - 2:3

Let Number $2x \times 3x = 294$

LCM \times HCF

$$2x \times 3x = 6x^2 = 294$$

$$6x^2 = 294$$

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

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

$$x = \sqrt{49}$$

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

$$x = 7$$

Now $x = 7$ then put the values.

$$1^{st} = 2(7) \text{ and } 2^{nd} = 3(7) = \boxed{14 \text{ and } 21}$$

5

(C)

Wall $8\text{ m} \times 6\text{ m} \times 22.5\text{ cm}$

$$\text{Wall} = 800\text{ cm} \times 600\text{ cm} \times 22.5\text{ cm} = 10,8000,000\text{ cm}^3$$

Bricks dimension: $25\text{ cm} \times 11.25\text{ cm} \times 6\text{ cm} = 1687.5$

$$\frac{\text{No of Bricks}}{\text{Bricks}} = \frac{108000,000\text{ cm}^3}{1687.5\text{ cm}^3} = 64,000$$

3

(D)

Smaller Number = x

Greater Number = $2x$

$$x + 2x = 98$$

$$3x = 98$$

$$\frac{3x}{3} = \frac{98}{3}$$

$$x = \frac{98}{3} = 32$$

1st Number $x = 32$

Greater No $2x = 32 \times 2 = 64$

5

Question # 03

(A)

Investment partners x, y, z

$$14x : 8y : 7z = 5 : 7 : 8$$

$$14 \times 5 : 8 \times 7 : 7 \times 8$$

$$70 : 56 : 58$$

(B)

Let consecutive odd number

be $x, x+2, x+4$

$$x + x + 2 + x + 4 = 91$$

3

$$3x + 6 = 91$$

$$3x = 91 - 6$$

$$x + 6 = 91 - 6$$

$$x = 85$$

So, consecutive odd numbers

are 85, 87, 89

$$85 + 87 + 89 = (\quad) \quad ? \quad ?$$

Cross check:

(c)

first NO = x

2nd NO = y

40% of $x = \frac{2}{3}$ of y

$$\frac{40x}{100} = \frac{2}{3}y$$

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

$$\frac{4x}{10} = \frac{2y}{3}$$

Cross multiplication

$$12x = 20y$$

$$\frac{x}{y} = \frac{20}{12}$$

$$\boxed{\frac{5}{3}}$$

Answer

$$x:y = 5:3$$

(d)

Distance = 4m away from tree

Height = 50m

if Distance = 6m

Height = ? (x)

Divided height by Distance

$$\text{So } \frac{h}{6} = \frac{50}{4}$$

$$\times \frac{h}{6} = \frac{50 \times 6}{4}$$

$$h = 25 \times 3$$

$$h = 75$$