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Paper : Business Maths

Q: 1

TM (Qs: ✓)

i) $\rightarrow (e)$

ii) $\rightarrow (b)$

iii) $\rightarrow (d)$

iv) $\rightarrow (e)$

v) $\rightarrow (a)$

vi) $\rightarrow (e)$

vii) $\rightarrow (e)$

viii) $\rightarrow (e)$

ix) $\rightarrow (b)$

x) $\rightarrow (e)$

Question No (2)(a)

Solution :-

$$\begin{aligned} \text{Selling Price} &= 5.67 \\ \text{Percentage of cost} &= 100 \end{aligned}$$

$$\text{So } \frac{5.67}{100}$$

$$\text{Selling Price as \% of cost} = 0.0567 \times 5.67$$

(b) Selling Price = ?
Formula

$$\text{Markup on cost} = \frac{(\text{Price} - \text{cost})}{\text{cost}}$$

$$\text{Markup on cost} = 0.26 \left(\frac{\text{Price} - 4.50}{4.50} \right)$$

By cross Multiplication

$$0.26 \times 4.50 = \text{Price} - 4.50$$

$$\Rightarrow 1.17 = \text{Price} - 4.50$$

$$\Rightarrow \text{Price} = 1.17 + 4.50$$

$$\text{Selling Price} = 5.67$$

Question No (2)(b)

$$(x^2 - 9) \div (x+3) \times (4x-3) \div 2 = x$$

$$\frac{x^2 - 9}{x+3} \times \frac{4x-3}{2} = x$$

$$\frac{(x+3)(x-3)(4x-3)}{2(x+3)} = x$$

$$(x-3)(4x-3) = x \quad \text{or} \quad 4x-3 = 2x$$

either $x-3 = 2x$
 $-3 = 2x - x$
 $x = -3$

$$x = -3$$

$$4x - 2x = 3$$
$$2x = 3$$
$$x = 3/2$$

$$x = 3/2$$

Question No (3)(a)

Solution:-

$$\text{Brother} + \text{Sister} = 60 \rightarrow (A)$$

$$\text{Sister} = 3 * B$$

Put this in (A)

$$4B = 60$$

$$B = 15$$

$$S = 45 \quad \text{Answer}$$

← → ← → ← → ← →

Question No (3)(b)

Solution:-

Markup

$$18.75 - 15 = 3.75$$

Percent Markup

$$(3.75 / 15) * 100 = 25\% \quad \text{Answer}$$

Question No (4) (a)

Solution :-

$$\text{List Price} = \$150$$

$$\text{Discount} = 20\%$$

$$\text{cost} = 150 - 150 * (20/100)$$

$$\text{cost} = 120$$

Question No (4) (b)

Solution :-

$$\text{Heat} + \text{Electricity} = 1080 \rightarrow (A)$$

$$\text{Heat} = 3 * \text{Electricity}$$

Put in (A)

$$4 \text{ Electricity} = 1080 \Rightarrow \left(\frac{1080}{4} \right)$$

$$\text{Electricity} = 270$$

$$\text{Heat} = 810$$

Question No (5)(a)

Solution:-

$$4 \text{ Men} + 6 \text{ Boys} = 5 \rightarrow (A)$$

$$3 \text{ Men} + 4 \text{ Boys} = 7 \rightarrow (B)$$

From B

$$\text{Men} = \frac{7 - 4B}{3}$$

Put in (A)

$$4 \left(\frac{7 - 4B}{3} \right) + 6B = 5$$

$$B = -6.5$$

$$M = 11$$

(←) (→) (←)

Question No (5)(b)

Solution:-

$$\text{List Price} = \$150$$

$$\text{Discount} = 20\%$$

$$\text{Cost} = 150 - 150 \left(\frac{20}{100} \right)$$

$$\text{Cost} = 120 \quad \text{Answer}$$