

**Name :- kiran qureshi**

**1D #14166**

**Q#1 : Ans:**

**1. E**

**2. B**

**3. D**

**4. E**

**5. D**

**6. E**

**7. A**

**8. E**

**9. B**

**10. B**

(A)  $\Rightarrow$

$$\text{Cost Price} = 4.5 \$$$

$$\text{Mark up} = 26\% = 0.26$$

$$\text{Selling price} = (\text{Mark up} \times \text{product cost} + \text{product cost})$$

b) selling price

$$S.P = (0.26 \times 4.5) + 4.5$$

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

a) Selling price as percent of Cost Price

$$\text{Cost price} = \frac{5.67}{4.5} \times 100$$

$$= 126\% \text{ of cost price}$$

$$c) \text{ Mark up} = \frac{\text{Profit}}{\text{cost}} \times 100$$

$$= \frac{1.17}{4.5} \times 100$$

$$= 26\%$$

Q.4) b) :-

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

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

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

$$\frac{x-3}{1} \times \frac{4x-3}{2} = x$$

$$(x-3)(4x-3) = 2x$$

$$4x^2 - 3x - 12x + 9 = 2x$$

$$4x^2 - 15x + 9 = 2x$$

$$4x^2 - 15x - 2x + 9 = 0$$

$$4x^2 - 17x + 9 = 0$$

Using Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-(-17) \pm \sqrt{(-17)^2 - 4(4)(9)}}{2(4)}$$

$$x = \frac{17 \pm \sqrt{289 - 144}}{8}$$

$$x = \frac{17 \pm \sqrt{145}}{8}$$

$$x = \frac{17 + 12.04}{8},$$

$$x = \frac{17 - 12.04}{8}$$

$$x = 3.63, \quad x = 0.62$$

Q#3 (a)

Present ages

$$G + B = 60$$

$$G = 60 - B$$

2- years back

$$G = 2B$$

$$\therefore G = 60 - B$$

$$3B = 60 - B$$

$$B = \frac{60}{4}$$

$$B = 15$$

So

$$G = 60 - B$$

$$G = 60 - 15$$

$$G = 45 \text{ Ans}$$





Q3 (b)

$$\begin{aligned} \text{Selling Price} &= \$ 18.75 \\ \text{Cost} &= \$ 15 \end{aligned}$$

$$\begin{aligned} \text{Markup based on Cost} &= \text{Selling Price} - \text{Cost} \\ &= 18.75 - 15 \\ &= 3.75 \end{aligned}$$

$$\begin{aligned} \text{Markup \%} &= \frac{\text{S.P.} - \text{C}}{\text{C}} \times 100 \\ &= \frac{18.75 - 15}{15} \times 100 \end{aligned}$$

Q#4 (a) :-

$$\begin{aligned} \text{list price} &= 150 \text{ USD} \\ \text{Trade discount} &= 20\% \end{aligned}$$

$$\begin{aligned} \text{Net cost} &= \text{list price} - \text{Trade discount} \\ &= 150 - 20\% \\ &= 149.8 \text{ USD} \end{aligned}$$

(b)

$$\text{Heat} + \text{light} = 1080$$

$$\begin{aligned} \text{Set Heat} &= 3x \\ \text{light} &= x \end{aligned}$$

So:

$$3x + x = 1080$$

$$4x = 1080$$

$$x = \frac{1080}{4}$$

$$x = 270$$

$$\text{light} = x = 270$$

$$\text{Heat} = 3x = 3(270) = 810$$

Q# 5 (a)

$$1 \text{ man's } 1 \text{ day work} = \frac{1}{x}$$

$$1 \text{ boy's } 1\text{-day work} = \frac{1}{y}$$

$$4 \text{ men's } 1\text{-day work} + 6 \text{ boys } 1 \text{ days work} = \frac{1}{5}$$

$$\frac{4}{x} + \frac{6}{y} = \frac{1}{5}$$

let

$$\frac{1}{x} = u \quad \& \quad \frac{1}{y} = v$$

$$4u + 6v = \frac{1}{5} \quad \text{--- (i)}$$

Now again:-

$$3 \text{ men's } 1\text{-day work} + 4 \text{ boys } 1\text{-day work} = \frac{1}{7}$$

$$3u + 4v = \frac{1}{7} \quad \text{--- (ii)}$$

Multiply eq. 1 by 3 &amp; 2 by 4

$$12u + 18v = \frac{3}{5} \quad \text{--- (iii)}$$

$$12u + 16v = \frac{4}{7} \quad \text{--- (iv)}$$



Subtract 3 and 4

$$2v = \frac{1}{35}$$

As  $v = \frac{1}{y}$

$$2\left(\frac{1}{y}\right) = \frac{1}{35}$$

$$y = 70$$

Put values in eq (1)

$$4u + 6v = \frac{1}{5}$$

$$4u = \frac{1}{5} - \frac{1}{70}$$

$$4u = \frac{4}{35}$$

$$u = \frac{1}{35}$$

$$\frac{1}{x} = \frac{1}{35}$$

$$x = 35$$

Men : day  
1 : 70

Boy : day  
1 : 35

b) list Price = \$ 150

Trade discount = 20 %

$$\begin{aligned}\text{Net cost} &= \text{C.D} - \text{T.D} \\ &= 150 - 20\% \\ &= 149.8 \text{ USD.}\end{aligned}$$