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Subject :- Business Maths

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Assignment :- 2

Q1:- let num be x denom y ✓

$$x+y = 2y-3$$

$$x-y = -3 \rightarrow (1)$$

$$x-1 = \frac{1}{2}(y-1)$$

$$2x-2 = 1 \rightarrow (2)$$

from (1) and (2)

$$x-y = -3$$

$$\begin{array}{r} 2x-y = 1 \\ \hline \end{array}$$

$$-x = -4$$

$$= \frac{4}{7} \text{ Ans.}$$

Q2:- let the time taken by men be x and by by y .

A/S

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

$$\frac{3}{x} + \frac{4}{y} = \frac{1}{7} \rightarrow \textcircled{ii}$$

let $u = \frac{1}{x}$ and $v = \frac{1}{y}$

$$4u + 6v = \frac{1}{5} \times 3$$

$$3u + 4v = \frac{1}{7} \times 4$$

$$\begin{array}{r} 12u + 18v = 35 \\ -12u + 16v = 4/7 \\ \hline \end{array}$$

$$2v = \frac{3}{5} - \frac{1}{7} = \frac{21-20}{35} = \frac{1}{35}$$

$$v = \frac{1}{35} \times 2 = \frac{1}{70} = \frac{1}{y}$$

$$y = 70 \text{ days}$$

$$x = 35 \text{ days}$$

Q3:-

List Price = \$150 Net cost = ?

Trade discount = 20%

Sol:-

Net cost = List Price - trade discount

$$\text{Net cost} = 150 - 0.2(150)$$

$$= 150 - 30$$

$$\text{Net cost} = 120$$

Q4:-

List Price = \$150

Trade Discount = 20% (series discount)

Net cost = ?

Sol:-

Discount Series = $100\% - 20\% = 80\%$

$100\% - 10\% = 90\%$

So

Net decimal equivalent = $(0.8 \times 0.9) = 0.72$

Now

Net cost = Net decimal equivalent
 \times list price

$= 0.72 \times 150$

Net cost = 108 Ans

Q5:-

Ans:- List Price \$120

$$120 \times (0.8 \times 0.9)$$

$$120 \times (0.72) = 86.4$$