

Name  $\rightarrow$  M. Sohrab

ID - 14589

Submitted to Dr. Liaqat Ali

let num~~ber~~ be  $x$  denomy  
A/Q

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

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

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

$$2x - 2 = y - 1$$

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

from (1) and (2)

$$x - y = -3$$

$$2x - y = 1$$

---

$$-x = -4$$

$$x = 4$$

Put  $x = 4$  in eq (1)

$$y = 7.$$

$$= \left( \frac{4}{7} \right) \text{ Ans}$$

Q2

let the time taken by men be  $x$  and by boy

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

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

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

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

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

$$12u + 18v = 35$$

$$\underline{12u + 16v = 20}$$

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

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

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

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

Q3:-

List Price = \$150

Net cost = ?

Trade discount = 20%

Sol:-

Net cost = List price - trade discount

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

$$= 150 - 30$$

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

## Example.

Q48- List Price = \$150

Trade Discount = 20/10 (series discount)

Net cost = ?

Soln-

$$\text{Discount Series} = 100\% - 20\% = 80\%$$

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

So

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

Now

$$\text{Net cost} = \text{Net decimal equivalent} \times \text{List price}$$

$$= 0.72 \times 150$$

$$\boxed{\text{Net cost} = 108}$$

Ans.