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Assignment Business Math

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(1)

Q 1 :- What number increased by 25 gives 85?

Sol:-

Given number is = 25

Let increased by =  $x$

then gives 85

$$25 + x = 85$$

Subtract 25 on b/s

$$\cancel{25} - \cancel{25} + x = 85 - 25$$

$$x = 60$$

So if we 60 increased in 25 then gives us 85.

Q: 2 Heat And electricity together cost 1080 in January.

If heat is three times at light: So  $x$  and  $3x$

$$x + 3x = 1080$$

$$4x = 1080$$

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

$$x = 270$$

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$$\text{Light cost} = 270$$

$$\text{and heat is} = 3 \times$$

$$= 3 \times 270$$

$$\text{Heat cost} = 810 \text{ Ans.}$$

Q 3:- 4 employees in their ratio salaries 7, 4, 2, 5

$$\text{total bonus} = \text{Rs } 540$$

given ratio

$$= 7:4:2:5$$

$$\text{Sum of Ratio} = 7 + 4 + 2 + 5 = 18$$

$$\text{bonus 1st emp} = \frac{7}{18} \times 540^{\frac{30}{}}$$

$$= 7 \times 30$$

$$\text{1st emp} = 210$$

$$\text{2nd emp} = \frac{4}{18} \times 540^{\frac{30}{}}$$

$$= 4 \times 30$$

$$\text{2nd emp} = 120$$

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$$\text{3rd emp} = \frac{2}{18} \times 540^{30}$$

$$= 2 \times 30$$

$$\text{3rd emp} = 60$$

$$\text{4th emp} = \frac{5}{18} \times 540^{30}$$

$$= 5 \times 30$$

$$\text{4th emp} = 150$$

210, 120, 60, 150 Ans.

Q 4:- Let the present age of son is  $x$

Then the age of father is  $= 4x$

After 24 years father age

became 2 times of son

$$\text{So, } = x + 24$$

$$= 4x + 24$$

$$4x + 24 = 2(x + 24)$$

$$4x + 24 = 2x + 48$$

$$4x - 2x = 48 - 24$$

(4)

$$2x = 24$$

divide (2) on b/s

$$\frac{2x}{2} = \frac{24}{2}$$

$$x = 12$$

So son age is 12 years

The father age is  $= 4x$

$$= 4 \times 12$$

So the age of father is 48 years.

Q 5:- Suppose the age of girl and brother is  $x, y$ .

according to the question

$$x + y = 26 \quad \text{--- (1)}$$

3 years ago

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

$$4x - 12 = y - 3$$

$$4x - y = -3 + 12$$

$$4x - y = 9 \quad \text{--- (2)}$$

Add eq (1) and (2)

$$x + y = 26$$

$$4x - y = 9$$

$$\hline 5x = 35$$

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divide 5 on b/s

$$\frac{8x}{8} = \frac{28 \cdot 7}{8}$$

$$x = 7$$

put  $x = 7$  in eq (1)

$$x + y = 26$$

$$7 + y = 26$$

$$y = 26 - 7$$

$$y = 19$$

girl age 19 years  
and brother age 7 years.

Q 6:- Let the number is  $x$  and  $y$

$$x + y = 84 \quad \text{--- (1)}$$

$$x = y + 12$$

$$x - y = 12 \quad \text{--- (2)}$$

add eq (1) and (2)

$$x + y = 84$$

$$x - y = 12$$

$$\hline 2x = 96$$

divide (2) on b/s

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$$\frac{2x}{2} = \frac{96}{2} \cdot 48$$

$$x = 48$$

put the value of  $x$  in eq ①

$$x + y = 84$$

$$48 + y = 84$$

$$y = 84 - 48$$

$$y = 36$$

So the number is 48, 36.

Q 7:-

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

$$\text{Trade discount} = 20\%$$

$$\text{net cost} = ?$$

$$\text{price of discount} = 150 \times 20\%$$

$$= \frac{150 \times 20}{100}$$

$$\text{price of discount} = 30$$

$$\text{net cost} = \text{m.p} - \text{dis}$$

$$= 150 - 30$$

$$\text{net cost} = \$ 120 \text{ Ans.}$$



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Q 8: List price = \$ 150  
Trade discount = 20/10 (series dis)  
Find the net cost = ?

Sol: As we know

Net cost = List price × Trade dis  
puting value

$$\text{Net cost} = \$ 150 \times 0.72$$

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

Ans.

Trade dis

100%      100

-20      -10

80%      90%

$$0.8 \times 0.9 = 0.72$$

Q 9: Selling price = \$ 18.75  
cost = \$ 15

Markup based on cost = ?

percentage Markup based on cost = ?

Sol: As we know

cost + Markup = selling price

Markup = selling price - cost

puting value

$$\text{Markup} = \$ 18.75 - \$ 15$$



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Now percentage Markup based on cost.

As we know

$$\text{Rate} = \frac{\text{Part}}{\text{Base}} = \frac{\$ 3.75}{\$ 15}$$

$$\text{Rate} = 0.25$$

So, percentage Markup on cost = 25%  
M.

Q 10:- The tower market sells aspirin for \$ 3.38 per 100 tablet bottle. If that pays \$ 2.60 per bottle, what is the markup percent on cost?

Sol:-

Sell for \$ 3.38

Cost is \$ 2.60

profit is \$ 0.78

$$\text{Markup} = (0.78 / 2.60) \times 100 = 30\%$$

So Markup percent on cost = 30%