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**Part-l**

**Q 1:**

**Ans:-**

1. **D** 2. **E**, 3. **D**, 4. **E**, 5. **C**, 6. **C**, 7. **C**, 8. **E,** 9. **B**, 10.**E**

**(Part-ll)**

**Ques 2: (a)**

**Ans:**

Let four employees be = A , B , C , D

Ratio of their shares = 7x : 4x : 2x : 5x

Sum of ratio = 7x + 4x + 2x + 5x = 540

18x = 540

x = 30

**So,**

Shares of A = 7x = 7 x 30 = 210

B = 4x = 4 x 30 = 120

C = 2x = 2 x 30 = 60

D = 5x = 5 x 30 = 150Ans.

**Ques 2: (b)** Solve for x in the following equation



**Ans:-**



(x + 2) (x – 2) ÷ ( x + 2) x (4x – 2) ÷ 2 = x

(x + 2) (x – 2) x 2 (x – 2) ÷ 2x

(x + 2)

(x – 2) x 2 ( x – 2) = x

2

(x – 2) x ( x – 2) = x

(x – 2)2  = x

x2  - 4x + 4 = x

x2  - 4x – x + 4 = 0

x ( x – 4) – 1 ( x – 4) = 0

( x – 4) ( x – 1) = 0

x – 4 = 0 , x – 1 = 0

x = 4 , x = 1

**S.Set {4 , 1}Ans**

**Ques 3: (a)**

**Ans:-**

Existing age of girl = x

Existing age of her brother = y

So,

x + y = 26-----(1)

three years ago the age of girl

x – 3 = 4(y – 3)

x – 3 = 4y – 12

x – 4y = -12 + 3

x - 4y = - 9------(2)

Subtracting (2) from (1) we get

x + y = 26

x – 4y = -9

* + = +

5y = 35

y = 7

put y = 7 in eq (1)

x + y = 26

x + 7 = 26

x = 26 – 7

x = 19

Present age of girl = 19

Present age of her brother = 7

**Ques3: (b)**

**Selling price = $18.75**

**Cost = $15**

**Markup based on cost = ?**

**Percent markup based on cost = ?**

**Ans:**

S.P = 18.75

Cost = 15

Mark-up based on cost = ?

Percentage mark-up based on cost =?

Mark-up based on cost = 18.75 – 15 = 3. 75

Percentage mark-up based on cost = 3.75/18.75 x 100% = 20%

**Ques 4: (a)**

**List price = $150**

**Trade discount = 20%**

**Find the net cost.**

**Ans:**

Discount = Trade discount x List Price

= 20% x 150

= 20 x 150

100

**= $30**

**Ques 4: (b)**

**Ans:**

Consumption of light = x

Consumption of heating (gas) = 3x

X + 3x = 1080

4x = 1080

x = 270

Light charges = x = Rs 270

Heating charges = 3x = 3 x 270 = Rs 810 Ans

**Ques 5: (a)**

**Ans:-**

Suppose 1 man can finish the work in x days and 1 boy alone can finish it in y days.

1 men`s 1 day`s work = 1/x

1 boy`s 1 day`s work = 1/y

(4 men`s 1 day`s work ) + ( 6 boys 1 day`s work) = 1/5

= 4/x + 6/y = 1/5

= 4U + 6V = 1/5 (where 1/x = U and 1/y = V)

4U + 6V = 1/5 ---------- eq (1)

Again,

(3 men`s 1 day`s work) + ( 4 men`s 1 day`s work) = 1/7

= 3/x + 3/y = 1/7

3U +V = 1/7 ------------- eq (2)

Multiplying eq (1) by 3 and eq (2) by 4

12U + 18V = 3/5------------ eq (3)

And

12U + 16V = 4/7 ---------- eq (4)

Subtracting eq 4 from eq 3 then we get

2V = (3/5 – 4/7)

2V = 1/35

V = 1/35\*2

V = 1/70

1/7 = V

1/y = 1/70

Y = 70 days

**Putting V = 1/70 in eq (1) we get**

4U + 6V = 1/5

4U = ( 1/5 – 6V)

4U = ( 1/5 – 6/70)

4U = (14-6/7)

4U = 8/70

U = 8/70 x 1/4

U = 1/35

1/x = U

1/x = 1/35

X = 35 days

So,

**1 men can finish work in 70 days and 1 boy can finish work in 35 days.**

**Ques 5: (b)**

**List price = $150**

**Trade discount = 20%**

**Find the net cost.**

**Ans:**

Discount = Trade discount x List Price

= 20% x 150

= 20 x 150

100

**= $30**