.15 should be added.

## (Homework)

) Ahmad's monthly income is 90,000. While his expenditure is 65,000/.

) Find ratio b/w income expenditure

) Ratio b/w expenditure and saving

) Ratio b/w Saving & income.

**Solution:**

) Given:

Ahmad's montly income = RS 90,000

Ahmad's expenditure = RS 65,000

Required:

a) income: expenditure = ?

b) expenditure : Saving = ?

c) Saving : income = ?

Solution:

a):

income : expenditure

90,000 : 65000

18 : 13

**18 : 13** Ans

b) expenditure : Saving → (A)

Saving = total income - expenditure

= RS 90,000 - 65000

= RS 25000 putting in (A)

65,000 : 25,000

13 : 5

**13 : 5** Ans

c) Saving : income

25,000 : 90,000

5 : 18

**5 : 18** Ans

4

write the final answers in the form of statements.....

Q: Two number are respectively 20/- & 50/- more than a 3rd number. Find ratio of 1st and 2nd number:

Solution:

Let 3rd number be: z

1st number be x and 2nd number be y

According to the given condition

$x = z + 20\%$ and $y = z + 50\%$

Suppose, $z = 100$

then: $x = 100 + 20\%$

$x = 100 + 20$

$x = 20$

& $y = 100 + 50\%$ $\Rightarrow y = 100 + 50$

$y = 50$

Ration b/w x & y is:

$x : y$

$20 : 50$

$2 : 5$ Answer

Days & food (members constant)

⇒ Aslam type 200 words in 30 mins.
How many words will he type in 12 min?

Words : Time

200 : 30 min

x : 15 min

There is direct relationship

So,

$200 \times 15 = x \times 30$

$30{,}000 = 30x$

dividing "30" on both sides:

$$\frac{30x}{30} = \frac{30{,}000}{30}$$

$x = 1000$ Ans

**Compound Proportion:**

1) 20 pens cost 200 rs, what will be cost of 35 pens?

**Solution:** 20 pen's cost = 200 RS

Cost of 1 pen $= \frac{200}{20} = 10$ RS

So,

Cost of 35 pens $= 10 \times 35$

$= 350$ RS Ans

4)

2) The value of x in the given proportion 1.6 : 1.2 :: 2.4 : x is ?

**Solution:** 1.6 : 1.2 :: 2.4 : x

As, Product of means = Product of extrem

$1.6 \times x = 1.2 \times 2.4$

$$\frac{1.6x}{10} = \frac{1.2 \times 2.4}{10 \quad 10}$$

$$\frac{16x}{10} = \frac{288}{100}$$

144

$16x = \frac{288}{5 \cancel{10}\phi} \times 1\phi$

$x = \frac{144}{5 \times 16}$

$x = \frac{\cancel{144}^{72}}{\cancel{40}\ 80}$ $\Rightarrow x = \frac{\cancel{72}^{36}}{\cancel{40}\ 20}$

$x = \frac{\cancel{36}^{18}}{5\ \cancel{20}}$

$x = \frac{18}{5}$ $\Rightarrow \boxed{x = 3.6}$

Shares Distribute/ تقسيم

attempt and upload a single qs for evaluation at a time.

3 persons started a buisness & spend 25000, 15000 & 40,000 respectively. find share of each out a profit of 14,400 in a year.

Solution: Let 3 person be A, B and C.

A : B : C

25000×1 : 15000×1 : 40,000×1

5 : 3 : 8 Share ratio (total) : 16

A's Share: Profit × A's ration

900 1800 3600 7200 SR

= 14,400 × 5 = 4500 RS Ans

1 2 4 8 16

B's Share.

= 14,400 × 3 (900)

1 16

= 2700 RS Ans

C's Share:

= 14,400 × 8 (900)

1 16

= 7200 RS Ans

Days & food (members cons...)

H.W Q⇒ Aslam type 200 words in 30 mins. How many words will he type in 12 min?

| Words | : | Time |
|---|---|---|
| 200 | : | 30 min |
| x | : | 15 min |

There is direct relationship

So,

$200 \times 15 = x \times 30$

$30,000 = 30x$

dividing "30" on both sides:

$$\frac{36x}{36} = \frac{30,000^{1000}}{1\,30}$$

$$\boxed{x = 1000} \text{ Ans}$$

## Compound Proportion:

1) 20 pens cost 200 rs, what will be cost of 35 pens?

**Solution:** 20 pen's cost = 200 RS

Cost of 1 pen $= \frac{20\not{0}}{2\not{0}} = 10$ RS

So,

Cost of 35 pens $= 10 \times 35$

$\boxed{= 350 \text{ RS}}$ Ans

2) The value of x in the given proportion 1.6 : 1.2 :: 24 : x is ?

**Solution:** 1.6 : 1.2 :: 2.4 : x

As, Product of means = Product of extreme

$1.6 \times x = 1.2 \times 2.4$

$\frac{1.6x}{10} = \frac{1.2 \times 24}{10 \quad 10}$

$\frac{16x}{10} = \frac{288}{100}$

144

$16x = \frac{288}{5 \cancel{10}\phi} \times 1\phi$

$x = \frac{144}{5 \times 16}$

$x = \frac{\cancel{144}^{72}}{40 \cancel{80}}$ $\Rightarrow x = \frac{\cancel{72}^{36}}{\cancel{40}\ 20}$

$x = \frac{\cancel{36}^{18}}{5\ \cancel{20}}$

$x = \frac{18}{5}$ $\Rightarrow \boxed{x = 3.6}$ Ans

8 (Shares) Distribute/ قسمة

data: Ratios $\rightleftharpoons$ whole

تاریخ: _____ دن: _____

② 2 buses tickets from RWP to ISB & 3 tickets from RWP to Muree cost 770 RS but 3 tickets from RWP to ISB & ① tickets from RWP to Muree cost 730 RS. What are fares for cities ISB & Murree from RWP? (CSS)

Let Bus ticket for RWP = ~~x~~ ISB = ~~y~~ x

RWP - Muree = y (and ~~RWP~~)

$2x + 3y = 770 \rightarrow ①$

$3x + 2y = 730 \rightarrow ②$

Multiplying eq ① by 3:

$6x + 9y = 770 \times 3 \Rightarrow 6x + 9y = 2310 \rightarrow ④$

Multiplying eq ② with ②:

$6x + 4y = 730 \times 2 \Rightarrow 6x + 4y = 1460 \rightarrow ⑤$

Subtracting eq ⑤ from ④:

$6x + 9y = 2310$

$-6x \ominus 4y = -1460$

$5y = 840$

$\frac{5y}{5} = \frac{840}{5} \Rightarrow y = 168$ RS

$2x + 3y = 770$

$2x + 3(168) = 770$

$2x = 770 - 492 \Rightarrow \frac{278}{2} = 139$ RS

⇒ Fare from RWP to Asl is RS 139 and Fare from Murree to RWP is RS 168

② Tayaba visited a book store, she purchased 3 books & 8 pens for 4350 RS, while cost of ② books & ⑤ pens is 2800 RS. find cost of one book & one pen.

Solution:

Let books = x  Pens = y

According to given condition:

$3x + 8y = RS\ 4350 \rightarrow ①$

$2x + 5y = RS\ 2800 \rightarrow ②$

Multiplying eq ① by ② & eq ② by ③:

$6x + 16y = 8700$ (Subtracting)

$-6x \pm 15y = 8400$

$y = 300$

$x = ?$

$3x + 8(300) = RS\ 4350$

$3x + 2400 = 4350$

$3x = 4350 - 2400$

$\frac{3x}{3} = \frac{1950}{3}$

$x = 650$

∴ Cost of 1 book = 650 and Cost of 1 pen = 300

⇒ Zahid left a property worth RS 1,750,000. His family had to pay off a debt of RS 150,000. The rest of money was distributed b/w a son & a daughter. How much did each child receive if the share of a son was double that of a daughter? (CSS)

Solution: Zahid left property: RS 1,750,000

Debt to be payed = 1,50,000

Money left = 1,750,000 − 1,50,000

= 25,000 RS

Solution:

Son : daughter

2 : 1 Total share ratio: 3

⇒ Son's share:

= Total × ratio of son.

SR

= 25,000 × 2 / 3

= 50,000 / 3 = 16,666.66 Ans

⇒ Daughter:

$= \frac{25,000 \times 1}{3} = \boxed{6333.33}$ Ans

⇒ In a farm, a farmer counted 78 legs & 35 heads consisting of cows & hens. How many hens does the farmers have.

1 Cow's legs = 4 1 hen's leg = 2

& head: 1

Cow = $x$, Hens = $y$

for head: $x + y = 35 \rightarrow (1)$

for legs: $4x + 2y = 78 \rightarrow (2)$

Subtracting (1) from (2):

$4x + 2y = 78$

$-x \ominus y = -35$

$3x - y = 43 \rightarrow (3)$

Subtracting (1) from (3)

$3x - y = 43$

$-x \oplus y = 35$

$2x = 8$

$\frac{2x}{2} = \frac{8}{2}$ $\boxed{x = 4}$

$x + y = 35$

Ans

دن: _____ تاریخ: _____

$4 + y = 35$

$y = 35 - 4$

$\boxed{y = 31}$

∴ Farmer have 4 cows & 31 hens.