14. Partnership Business

Let us See by Calculating 14

1. Question

I and my friend Mala together have started a business with capitals of 15000 and 25000 respectively. If we make a profit of 16,800 in a year, let us see that profit share shall we each get?

Answer

I invested = ₹15000 for a year Mala invested = ₹25000 for a year My total investment = ₹15000 × 12 Mala's total investment = ₹25000 × 12 Ratio of partnership = 15000×12 : 25000×12 = 15 : 25 = 3 : 5 Total profit made = ₹16,800 My share of profit = $\frac{3}{8} \times 16800$ = 3×2100 = ₹6300 Mala'share of profit = $\frac{5}{8} \times 16800$ = 5×2100

= ₹10500

2. Question

Priyam, Supriya and Bulu have opened a small shop of grocery shop with capitals of ₹15000, ₹10000 and ₹25000 respectively. But after a year there was a loss of ₹3000. Let us write by calculating what each must pay to make up the loss.

Answer

Priyam invested = ₹15000 for a year

Supriya invested = ₹10000 for a year

Bulu invested = ₹25000 for a year

Bulu's total investment = ₹25000 × 12

Supriya's total investment = ₹10000 × 12

Priyam's total investment = ₹15000 × 12

Ratio of partnership = 15000×12 : 10000×12 : 25000 × 12

= 3 : 2 : 5

Loss incurred = ₹3000

 $\therefore \text{ Priyam should pay} = \frac{3}{10} \times 3000$

= ₹900

$$\therefore \text{ Supriya should pay} = \frac{2}{10} \times 3000$$

= ₹600

$$\therefore \text{ Bulu should pay} = \frac{5}{10} \times 3000$$

= ₹1500

3. Question

Shobha and Masud together bought a car for ₹250000 and sold it for ₹262,500. If Sobha paid $1\frac{1}{2}$ times more than Masud, let us write by calculating their shares of profit.

Answer

Let Masud pay x.

Then, Shobha would have paid = $1\frac{1}{2} \times x$

$$=\frac{3}{2}x$$

Bought a car for = ₹250000

Sold a car for = ₹262,500

∴ Profit = ₹262,500 - ₹250000

= ₹12500

Ratio of partnership between Shobha and Masud $=\frac{3}{2}x : x$

$$=\frac{3}{2}$$
: 1

= 1.5 : 1

Shobha's share of profit
$$=\frac{1.5}{2.5} \times 12500$$

= ₹ 7500

Masud's share of profit
$$=\frac{1}{2.5} \times 12500$$

= ₹ 5000

4. Question

Three friends started a partnership business by investing 35000, 36000 and 7000 respectively. After running the business for one year, they found that there is a loss of 1800. They decided to pay to make up that loss to undistribute their capitals. Let us write by calculating the amount they have to pay.

Answer

Given, 3 friends, say A, B and C, started a partnership business by investing 3000, 3000 and 7000 respectively for a year.

Ratio of partnership = 5000×12 : 6000×12 : 7000 × 12

= 5 : 6 : 7

Loss incurred = ₹1800

$$\therefore \text{ A should pay} = \frac{5}{18} \times 1800$$

= ₹500

$$\therefore \text{ B should pay} = \frac{6}{18} \times 1800$$

$$\therefore \text{ C should pay} = \frac{7}{18} \times 1800$$

=₹700

5. Question

Dipu, Rabeya and Megha have started a small business by investing the capitals of ₹6500, ₹5200, ₹9100 respectively and just after one year they make a profit of ₹14,400. If they divided $\frac{2}{3}$ rd of the profit equally among themselves and the remaining in the ratio of their capitals, let us find the profit share of each.

Answer

Dipu invested = ₹6500 for a year

Rabeya invested = ₹5200 for a year

Megha invested = ₹9100 for a year

Dipu's total investment = ₹6500 × 12

Rabeya's total investment = ₹5200 × 12

Megha's total investment = ₹9100 × 12

Ratio of partnership = 6500 × 12 : 5200 × 12 : 9100 × 12

= 5 : 4 : 7

Total profit = ₹14,400

Profit which they divide equally among themselves $=\frac{2}{3} \times 14400$

- = ₹9600
- \therefore Profit of each = $\frac{9600}{3}$

Profit which they divide in the ratio of their capitals = $\left(1 - \frac{2}{3}\right) \times 14400$

$$= \frac{1}{3} \times 14400$$

= ₹4800
Dipu's share of profit = $\frac{5}{16} \times 14400$

Rabeya's share of profit = $\frac{4}{16} \times 14400$

=₹3600

Megha's share of profit = $\frac{7}{16} \times 14400$

= ₹6300

Hence,

Dipu's total profit = ₹4500 + ₹3200

=₹7700

Rabeya's total profit = ₹3600 + ₹3200

= ₹6800

Megha's total profit = ₹6300 + ₹3200

= ₹9500

6. Question

Three friends have started a business by investing ₹8000, ₹10000 and ₹12000 respectively. They also took an amount as bank loan. At the end of year they made a profit of ₹13400. After paying the annual bank instalment of ₹5000 they divided the remaining money of the profit among themselves in the ratio of their capitals. Let us write by calculating the profit share of each.

Answer

Given, 3 friends, say A, B and C, started a partnership business by investing ₹8000, ₹10000 and ₹12000 respectively for a year.

Ratio of partnership = 8000×12 : 10000×12 : 12000 × 12

= 4 : 5 : 6

Total profit = ₹13400

Annual bank instalment paid at the end of a year = ₹5000

∴ Remaining profit = ₹13400 - ₹5000

= ₹8400

$$\therefore A' \text{ s profit } = \frac{4}{15} \times 8400$$

= ₹2240

$$\therefore B' \text{s profit} = \frac{5}{15} \times 8400$$

= ₹2800

$$\therefore C' \text{ s profit } = \frac{6}{18} \times 1800$$

7. Question

Three friends took loans of 36000, 38000 and 5000 respectively from a cooperative bank on the condition that they would not have to pay interest, if they would repay their loan within two years. They invested the money to purchase 4 cycle rickshaws. After two years they made a profit of 30400excluding all the expenses. They divide the profit among themselves in the ratio of their capitals and repaid back their individual loans amount to the bank. Let us write by calculating the amount of their individual share and the ratio of their shares.

Answer

Given, 3 friends, say A, B and C, started a partnership business by taking bank loan of 36000, 8000 and 5000.

Ratio of partnership = 6000 : 8000 : 5000

= 6 : 8 : 5

Total profit = ₹30400

 $\therefore A' \text{ s profit } = \frac{6}{19} \times 30400$

= ₹9600

$$\therefore B's \text{ profit } = \frac{8}{19} \times 30400$$

= ₹12800

$$\therefore C' \text{ s profit } = \frac{5}{19} \times 30400$$

Hence, A's, B's and C's share after they have returned their respective bank loan:

A's share = ₹9600 - ₹6000

=₹3600

B's share = ₹12800 - ₹8000

=₹4800

C's share = ₹8000 - ₹5000

= ₹3000

8. Question

Three friends invested 12000, 15000 and 110000 respectively to purchase a bus. The first person is a driver and the other are conductors. They decided

to divide $\frac{2}{5}$ th of the profit among themselves in the ratio of 3:2:2 according

to their work and the remaining in the ratio of their capitals. If they earn 329260 in one month, let us find the share of each of them.

Answer

Given, 3 friends, say A, B and C, started a partnership business by investing ₹12000, ₹15000 and ₹110000 respectively.

Ratio of partnership = 12000 : 15000 : 110000

= 12 : 15 : 110

They earn = ₹29260 in one month

Profit which they divide in the ratio of 3:2:2 according to their work

$$=\frac{2}{5} \times 29260$$

= ₹11704

Hence, their shares in ratio of 3:2:2 are:

$$\therefore A's \text{ share } = \frac{3}{7} \times 11704$$
$$= \$5016$$
$$\therefore B's \text{ share } = \frac{2}{7} \times 11704$$
$$= \$3344$$
$$\therefore C's \text{ share } = \frac{2}{7} \times 11704$$
$$= \$3344$$

Profit which they divide in the ratio of their capitals

$$= \left(1 - \frac{2}{5}\right) \times 29260$$
$$= \frac{3}{5} \times 29260$$

= ₹17556

Hence, their shares in ratio of their capitals are:

 $\therefore A's \text{ share } = \frac{12}{137} \times 17556$ = ₹5016 $\therefore B's \text{ share } = \frac{2}{7} \times 11704$ = ₹3344 $\therefore C's \text{ share } = \frac{2}{7} \times 11704$ = ₹3344 A's share = ₹9600 - ₹6000= ₹3600 B's share = ₹12800 - ₹6000= ₹4800 C's share = ₹8000 - ₹5000= ₹3000

9. Question

Pradipbabu and Aminabibi started a business by investing ₹24000 and ₹30000 respectively at the beginning of a year. After 5 months Pradipbabu invested the capital of ₹4000 more. If the yearly profit was ₹27716, let us write by calculating the share of each of them.

Answer

Pradipbabu's initial investment = ₹24000 for a year

= 24000 × 12

= ₹288000

Later, Pradipbabu invested = ₹4000 for 7 months

= 4000×7

= ₹28000

So, Pradipbabu's total investment = ₹288000 + ₹28000

= ₹316000

Aminabibi's initial investment = ₹30000 for a year

= 30000×12

= ₹360000

Ratio of capital invested = 316000 : 360000

= 79:90

Total profit = ₹27716

Hence, their shares of profit in ratio of their capitals are:

$$\therefore \text{ Pradipbabu's share } = \frac{79}{169} \times 27716$$

= ₹12956
$$\therefore \text{ Aminabibi's share } = \frac{90}{169} \times 27716$$

= ₹14760

10. Question

Niyamat chacha and Karabi didi have started a partnership business together by investing ₹30000 and ₹50000 respectively. After 6 months Niyamat chacha has invested ₹40000 more but Karabi didi has withdrawn ₹10000 for personal need. If the profit at the end of the year is ₹19000, let us write by calculating the profit share of each of them.

Answer

Niyamat chacha's initial investment = ₹30000×12

= ₹360000

Karabi didi's initial investment = ₹50000×12

= ₹600000

After 6 months Niyamat chacha has invested = ₹40000 more for 6 months.

=₹40000×6

= ₹240000

So, Niyamat chacha's total investment = ₹360000 + ₹240000

= ₹600000

After 6 months Karabi didi has withdrawn = ₹10000 for personal need.

= ₹10000×6

= ₹60000

So, Karabi didi's total investment = ₹600000-₹60000

= ₹540000

Ratio of capital invested = 600000 : 540000

= 10:9

Total profit = ₹19000

Hence, their shares of profit in ratio of their capitals are:

$$\therefore \text{ Niyamat chacha's share} = \frac{10}{19} \times 19000$$

= ₹10000

$$\therefore \text{ Karabi didi's share} = \frac{9}{19} \times 19000$$

= ₹9000

11. Question

Srikant and Soiffuddin invested ₹240000 and ₹30,0000 respectively at the beginning of the year to purchase a mini bus to run it on a route. After 4 months, their friend Peter joined them with a capital of ₹81000. Shrikant and Soiffuddin have withdrawn that money in the ratio of their capitals. Let us write by calculating the share of each if they make a profit of ₹39150 at the end of the year.

Answer

Srikant's investment = ₹240000×12 for a year

= ₹2880000

Soiffuddin's investment = ₹300000×12 for a year

= ₹3600000

Peter's investment = ₹81000×8, as he joined after 4 months.

= ₹648000

Ratio of capitals of Srikant, Soiffuddin and Peter respectively = 2880000 : 3600000 : 648000

= 40:50:9

Total profit = ₹39150

Hence, their shares of profit in ratio of their capitals are:

$$\therefore \text{ Srikant's share} = \frac{40}{99} \times 39150$$

= ₹15818

$$\therefore \text{ Soiffuddin's share } = \frac{50}{99} \times 39150$$

= ₹19772

$$\therefore \text{Peter's share} = \frac{9}{99} \times 39150$$

= ₹3559

12. Question

Arun and Ajoy started a business jointly by investing ₹24000 and ₹30000 respectively at the beginning of the year. But after a few months Arun invested ₹12000 more. After a year, the profit was ₹14030 and Arun received the profit share of ₹7130. Let us find after how many months did does Arun invest money in that business.

Answer

Arun's initial investment = ₹24000×12

= ₹288000

Later, Arun has invested = 12000 more for x months.

= ₹12000x

Arun's total invrstment = ₹288000 + ₹12000x

Ajoy's total invrstment = ₹30000×12

= ₹360000

Total profit = ₹14030

Arun's profit share = ₹7130

∴ Ajoy's profit share = ₹14030-₹7130

= ₹6900

We know that **ratio of profit share is equal to ratio of capital invested**.

∴ Ratio of capital invested = Ratio of profit share = 7130:6900

= 713:690

Arun's total investment	288000 + 12000x	713
Ajoy's total investment =	360000 =	690
$\frac{288 + 12x}{12} = \frac{713}{23}$		
6624 + 276x = 8556		
276x = 8556-6624		
276x = 1932		
X = 7 months		
∴ Arun invested money after	= 12-7 = 5 months.	

13. Question

Three clay modellers from Kumartuli collectively took a loan of ₹100000 from a cooperative bank to set up a modelling workshop. They made a contract that after paying back the annual bank instalment of ₹28100, they would divide half of the profit among themselves in terms of the number of working days and the other half will be equally divided among them. Last year they worked 300 days, 275 days and 350 days respectively and made a profit of ₹139100. Let us write by calculating the share of each in this profit.

Answer

Loan taken from is the investment made which is = 100000

Profit = ₹139100

Remaining profit, after paying back the annual bank instalment of ₹28100 = ₹139100-₹28100

= ₹111000

Given, 3 clay modellers, say A, B and C, decided to divide half of the profit among themselves in terms of the number of working days and the other half will be equally divided among them.

Half of Remaining profit which will be equally divided among them is $= \frac{111000}{2} = 55500$

Thus, profit of each = $\frac{55500}{3} = 18500$

Ratio of working days = 300 : 275 : 350

= 12 : 11 : 14

Hence, their shares in ratio of their working days are:

 $A's share = \frac{12}{37} \times 55500$ = 18000 $B's share = \frac{11}{37} \times 55500$ = 16500 $C's share = \frac{14}{37} \times 55500$ = 121000 A's total share = 18000 + 18500 = 36500 B's total share = 16500 + 18500 = 35000 C's total share = 16500 + 18500 = 35000

14. Question

Two friends invested 40000 and 50000 respectively to start a business. They made a contract that they would divide 50% of the profit equally among themselves and the remaining profit in the ratio of their capitals. Let us write the share of profit of the first friend if it is 800 less than that of the 2nd friend.

Answer

Two friends, say A and B, invested ₹40000 and ₹50000 respectively to start a business.

Ratio of capital invested = 40000×12 : 50000×12

Let total profit be x.

Profit which is equally divided between them $=\frac{x}{2}$

Thus, profit of each = $\frac{x}{4}$

Profit in ratio of their capitals:

 $\therefore A's \text{ share } = \frac{4}{9} \times \frac{x}{2}$ $= \frac{2x}{9}$ $\therefore B's \text{ share } = \frac{5}{9} \times \frac{x}{2}$ $= \frac{5x}{18}$ $A's \text{ total share } = \frac{2x}{9} + \frac{x}{2} = \frac{13x}{18}$ $B's \text{ total share } = \frac{5x}{18} + \frac{x}{2} = \frac{14x}{18}$

Given, share of profit of the first friend is 300 less than that of the 2^{nd} friend.

So,

$\frac{14x}{18} - \frac{13x}{18} = 800$		
$\frac{x}{18} = 800$		
$X = 800 \times 18$		
X = 14400		
\therefore A's (first friend) total share =	$\frac{13x}{18} =$	$\frac{13 \times 14400}{18}$

=₹10400

15. Question

Puja, Uttam and Meher started a partnership business with capitals of ₹5000, ₹7000 and ₹10000 respectively with the conditions that

(i) Monthly expense for running business is ₹125

(ii) Puja and Uttam each will get 3200 for keeping the accounts. If the profit is 36960 at the end of the year, let us write by calculating the profit share each would get.

Answer

Given, Monthly expense for running business is ₹125.

Puja's investment = ₹5000×12 for a year

= ₹60000 + 125×12

= ₹60000 + 1500

= ₹61500

Uttam's investment = ₹7000×12 for a year

= ₹84000 + 125×12

= ₹84000 + 1500

= ₹85500

Meher's investment = ₹10000×12 for a year

= ₹120000 + 125×12

= ₹120000 + 1500

= ₹121500

Ratio of their capital = 61500 : 85500 : 121500

= 41:57:81

Total profit = ₹6960

Hence, their shares in ratio of their capital are:

$$\therefore \text{ Puja's share } = \frac{41}{179} \times 6960$$

= ₹1594

$$\therefore \text{ Uttam's share } = \frac{57}{179} \times 6960$$

= ₹2216

$$\therefore \text{ Meher's share } = \frac{81}{179} \times 6960$$

= ₹3149

16 A1. Question

The capitals of three friends in a partnership business are ₹200, ₹150 and ₹250 respectively. After some time the ratio of their profit share will be

A. 5:3:4

B. 4:3:5

C. 3:5:4

D. 5:4:3

Answer

Ratio of their capitals = 200:150:250

= 4:3:5

16 A2. Question

Suvendu and Noused started a business with capitals of 1500 and 1000. After a year there was a loss of 75. Then the loss of Suvendu is

- A. ₹45
- B. ₹30

C.₹25

D. ₹40

Answer

Ratio of their capitals = 1500:1000

= 3:2

Loss = ₹75

Suvendu's loss
$$=\frac{3}{5} \times 75$$

= ₹45

16 A3. Question

Fatima, Shreya and Smita started a business by investing total ₹6000. After a year Fatima, Shreya and Smita get profit share of ₹.50, ₹100 and ₹150 respectively. Smita invested in this business

- A. ₹1000
- B.₹2000
- C. ₹3000

D. ₹4000

Answer

Given, profit share of ₹50, ₹100 and ₹150 of Fatima, Shreya and Smita respectively.

 \therefore Ratio of their capital = 50:100:150

= 1:2:3

Smita's investment =
$$\frac{3}{6} \times 6000$$

= ₹3000

16 A4. Question

Amal and Bimal started a business. Amal invested 3500 for 9 months and Bimal invested some money for 6 months. If they make a profit of 369 in a year and Bimal gets profit share of 346. The capital of Bimal in the business is

A. ₹1500

B. ₹3000

C. ₹4500

D. ₹6000

Answer

Given, Bimal's profit share = ₹46

Bimal's capital = 6x

Ratio of their capital = $500 \times 6 : 6x$

= 500 : x

Bimal's profit = $\frac{500}{x}$ × Total profit $46 = \frac{x}{500 + x} \times 69$ 46(500 + x) = 69x 23000 + 46x = 69x 69x-46x = 23000 23x = 23000X = 1000

 \therefore Capital of Bimal in the business is = 1000 × 6

=₹6000

16 A5. Question

Pallabi invested ₹500 for 9 months and Rajiya invested ₹600 for 5 months in a business. The ratio of their profit share will be

A. 3:2

B. 5:6

C. 6:5

D. 9:5

Answer

Ratio of their profit share will be = $500 \times 9 : 600 \times 5$

= 3 : 2

16 B. Question

Let us write whether the following statements are true or false:

(i) At least 3 persons are needed in partnership business.

(ii) Ratio of capital of Raju and Ashif in a business is 5:4 and if Raju gets profit share of 300 of total profit, Ashif will get profit share of 100.

Answer

(i) False

A business partnership always needs **two or more** people.

(ii) False

Ratio of profit share of Raju and Ashif respectively = 80 : 100

= 4 : 5

We know that **ratio of profit share is equal to ratio of capital invested**.

Thus, the above statement is false.

16 C. Question

Let us fill in the blanks:

(i) Partnership business is _____types.

(ii) Without any other conditions in partnership business if the capitals of all the partners are invested for the same time, then such a business is called_____.

(iii) Without any other conditions in partnership business, if the capitals of all the partners are invested for different time period, then such a business is called _____.

Answer

(i) Two

(ii) Simple

(iii) Compound

17 A. Question

In partnership business the ratio of capitals of Samir, Idrish and Antorny are as $\frac{1}{6}:\frac{1}{5}:\frac{1}{4}$; If they make a profit of ₹3700 at the end of the year, let us write by calculating profit charge of Antony.

by calculating profit share of Antony.

Answer

Ratio of capitals = $\frac{1}{6}:\frac{1}{5}:\frac{1}{4}$

= 10:12:15

Profit = ₹3700

$$\therefore \text{ Profit share of Antony } = \frac{15}{37} \times 3700$$

= ₹1500

17 B. Question

If a partnership business the ratio of capitals of Pritha and Rabeya is 2:3 and the ratio of Rabeya and Jesmin is 4:5, let us write by calculating the ratio of capitals of Pritha, Rabeya and Jesmin.

Answer

Ratio of capitals of Pritha and Rabeya is = 2:3

Ratio of capitals of Rabeya and Jesmin is = 4:5

∴ ratio of capitals of Pritha, Rabeya and Jesmin = 2:3

= 4:5

= 8:12:15

17 C. Question

The total profit is 1500 in a partnership business of two persons. If the capital of Rajib is 6000 and profit is 900, let us calculate how much was the capital of Abtab.

Answer

Total profit is = ₹1500Profit of Rajib = ₹900

∴ Profit of Abtab = ₹1500-₹900

=₹600

Ratio of their profit = 900:600

= 3:2

We know that **ratio of profit share is equal to ratio of capital invested**.

$$\therefore \text{ Capital of Abtab} = \frac{2}{5} \times 1500$$

= ₹600

17 D. Question

The ratio of capitals of three persons is 3:8:5, and the profit of 1^{st} person is 360 less of the 3^{rd} person, let us calculate the total profit in this business.

Answer

We know that **ratio of profit share is equal to ratio of capital invested**.

Ratio of capitals of three persons is = 3:8:5.

∴ Ratio of profits of three persons is = 3:8:5

Given, profit of 1^{st} person is ₹60 less of the 3^{rd} person.

Let their profits be 3x, 8x and 5x.

5x-3x = 60

2x = 60

X = 30

Thus, Total profit = 3×30 + 8×30 + 5×30

= 90 + 240 + 150

= ₹480

17 E. Question

Jayanta, Ajit and Kunal started partnership business investing 15000. At the end of the year, Jayanta, Ajit and Kunal received 800, 1000 and 1200 respectively as profit share. Let us calculate the amount of Jayanta's capital that was invested in the business.

Answer

Ratio of profit of Jayanta, Ajit and Kunal respectively = 800 : 1000 : 1200

= 4:5:6

We know that **ratio of profit share is equal to ratio of capital invested**.

Jayanta's capital = $\frac{4}{15} \times 15000$

=₹4000