

Sometimes two or more than two persons agree to run a business jointly. They are called partners and the deal is known as partnership.

1. **Simple partnership:** When capitals of all the persons are invested for the same time intervals, the gain or loss in the business is divided among the partners in the ratio of their investments.

2. **Compound partnership:** When capitals of partners are invested for different time intervals then equivalent capitals are obtained for 1 unit of time by multiplying the capital with the number of units. The gain or loss is now divided among partners in the ratio of these capitals.

Formula for compound partnership is

$$\frac{A's \text{ Capital} \times A's \text{ time in partnership}}{B's \text{ capital} \times B's \text{ time in partnership}} = \frac{A's \text{ profit}}{B's \text{ profit}}$$

### Solved Examples

1. Three partners A, B and C agree to divide the profit or loss in the ratio 1.50 : 1.75 : 2.25. In a particular year, they earn a profit of Rs. 66,000. Find the share of each.

**Ans:** Ratio of profits

$$= 1.50 : 1.75 : 2.25 = 150 : 175 : 225 = 6 : 7 : 9$$

$$A's \text{ share} = Rs. 66,000 \times \frac{6}{22} = Rs. 18,000$$

$$B's \text{ share} = Rs. 66,000 \times \frac{7}{22} = Rs. 21,000$$

$$C's \text{ share} = Rs. 66,000 \times \frac{9}{22} = Rs. 27,000$$

2. Vinod, Ramesh and Arun started a business jointly by investing Rs. 3,80,000, Rs. 4,00,000 and Rs. 4,20,000 respectively.

Divide the net profit of Rs. 2,40,000 among the partners.

**Ans:** Ratio of investment

$$= 3,80,000 : 4,00,000 : 4,20,000$$

$$= 19 : 20 : 21$$

Ratio of profit = 19 : 20 : 21

$$\text{Vinod's share} = Rs. 2,40,000 \times \frac{19}{60}$$

$$= Rs. 76,000$$

$$\text{Ramesh's share} = Rs. 2,40,000 \times \frac{20}{60}$$

$$= Rs. 80,000$$

$$\text{Arun's share} = Rs. 2,40,000 \times \frac{21}{60}$$

$$= Rs. 84,000$$

3. A, B and C enter into a partnership. A contributes Rs. 3,20,000 for 4 months, B contributes Rs. 5,10,000 for 3 months and C contributes Rs. 2,70,000 for 5 months. If the total profit be Rs. 1,24,800, what is C's share?

Ratio of capitals of A, B & C

$$= (3,20,000 \times 4) : (5,10,000 \times 3) : (2,70,000 \times 5)$$

$$= 12,80,000 : 15,30,000 : 13,50,000$$

$$= 128 : 153 : 135$$

$$C's \text{ share} = 1,24,800 \times \frac{135}{416} = Rs. 40,500$$

4. A, B and C enter into partnership. A invests some money at the beginning. B invests double the amount after 6 months and C invests thrice the amount after 8 months. If the annual profit is Rs. 18,000, what is C's share?

**Ans:** Suppose the investment of A is Rs. X

Ratio of investment of A, B, and C

$$= (12 \times X) : (6 \times 2X) : (4 \times 3X) = 1:1:1$$

$$\text{C's share} = \text{Rs. } 18,000 \times \frac{1}{3} = \text{Rs. } 6,000$$

5. A and B enter into a partnership. A invests Rs. 16,000 for 8 months and B remains in the business for 4 months. Out of a total

profit, B claims  $\frac{2}{7}$  of the profit. Find the contribution of B.

Ans:

$$\frac{\text{A's capital} \times \text{A's time in partnership}}{\text{B's capital} \times \text{B's time in partnership}} = \frac{\text{A's capital}}{\text{B's capital}}$$

$$\text{ie. } \frac{16,000 \times 8}{\text{B's Capital} \times 4} = \frac{5}{2}$$

$$\text{B's capital} = \frac{16,000 \times 8 \times 2}{4 \times 5} = \text{Rs. } 12,800$$

6. A and B enter into a speculation. A puts in Rs. 50 and B puts in Rs. 45. At the end of 4 months A withdraws half his capital and at the end of 6 months B withdraws half of his capital, C then enters with a capital of Rs. 70. At the end of 12 months in what ratio will the profit be divided?

Ans: A's share : B's share : C's share

$$= (50 \times 4 + \frac{50}{2} \times 8) : (45 \times 6 + \frac{45}{2} \times 6) : 70 \times 6$$

$$= 400 : 405 : 420 = 80 : 81 : 84$$

7. A, B and C enter into a partnership and their capitals are in the proportion of

$\frac{1}{3} : \frac{1}{4} : \frac{1}{5}$ . A withdraws half of his capital at the end of 4 months. Out of a total annual profit of Rs. 847, A's share is:

Ans: Ratio of capitals in the beginning

$$= \frac{1}{3} : \frac{1}{4} : \frac{1}{5} = 20 : 15 : 12$$

Ratio of investment for the whole year

$$= (20 \times 4 + 10 \times 8) : (15 \times 12) : (12 \times 12)$$

$$= 40 : 45 : 36$$

$$\text{A's share} = 847 \times \frac{40}{121} = \text{Rs. } 280$$

## PRACTICE TEST

1. In business A, B and C invested Rs. 380, Rs. 400 and Rs. 420 respectively. What is the share of A if they got Rs. 180 as profit.

- 1) Rs. 57                      2) Rs. 60  
3) Rs. 63                      3) Rs. 62

2. A started a business with a capital of Rs. 10,000 and 4 months later, B joined him with a capital of Rs. 5,000. What is the share of A of a total profit of Rs. 2,000 at the end of the year?

- 1) Rs. 2,000                  2) Rs. 1,600  
3) Rs. 1,500                  4) Rs. 1,000

3. A and B together invested Rs. 12,000 in a business. At the end of the year, out of a total profit of Rs. 1,800, A's share was Rs. 750. What was the investment of A?

- 1) Rs. 5,000                  2) Rs. 4,000  
3) Rs. 3,500                  4) Rs. 5,300

4. Rs. 750 is distributed among A, B and C such that A's share : B's share = 2:3 and B's share : C's share = 6:5. The share of A is

- 1) Rs. 150                      2) Rs. 175  
3) Rs. 200                      4) Rs. 250

5. A profit of Rs. 450 is divided between two partners, one of whom has contributed Rs. 1200 for 5 months and the other Rs. 750 for 4 months. How much amount did the second partner receive?

- 1) Rs. 300                      2) Rs. 425  
3) Rs. 150                      4) Rs. 175

6. A, B and C can do a work in 20, 25 and 30 days respectively. They undertook to finish the work together for Rs. 2,220. Then the share of A exceeds that of B by:

- 1) Rs. 120                      2) Rs. 180  
3) Rs. 300                      4) Rs. 600

7. Three partners A, B and C invest Rs. 13,000, Rs. 17,000 and Rs. 5,000 respectively in a business. They have a profit of Rs. 1,750. B's share of profit is:

- 1) Rs. 650                      2) Rs. 850  
3) Rs. 250                      4) Rs. 750

8. A starts a business with Rs. 30,000 and 4 months after B joins. If at the end of the year, the profits are divided by A and B in the proportion of 9:4, B's capital was:

- 1) Rs. 20,000      2) Rs. 25,000  
3) Rs. 20,700      4) Rs. 18,000

9. A invests Rs. 3,000 for one year in a business. How much should B invest in order that the profit after 1 year may be divided in the ratio 2:3?

- 1) Rs. 2,000      2) Rs. 1,800  
3) Rs. 3,600      4) Rs. 4,500

10. A and B start a business with initial investments in the ratio 12:11 and their annual profits are in the ratio 4:1. If A invested the money for 11 months, B invested the money for:

- 1) 3 months      2)  $3\frac{2}{3}$  months  
3) 4 months      4) 6 months

11. Anoop and Manoj invested Rs. 15,000 and Rs. 20,000 respectively and opened a shop. After one year they had a profit of Rs. 23,100. How much more will Manoj get than Anoop?

- 1) Rs. 3,300      2) Rs. 9,000  
3) Rs. 13,200      4) Rs. 5,000

12. A and B enter into a partnership and invest Rs. 1,20,000 and Rs. 2,00,000 respectively. At the end of two years, they make a

profit of Rs. 64,000. What is A's share in the profit?

- 1) Rs. 24,000      2) Rs. 25,000  
3) Rs. 40,000      4) Rs. 32,000

13. A, B and C enter into a partnership. A initially invests Rs. 25 lakhs and adds another Rs. 10 lakhs after one year. B initially invests Rs. 35 lakhs and withdraws Rs. 10 lakhs after two years and C invests Rs. 30 lakhs. In what ratio should the profits be divided at the end of three years?

- 1) 20:19:18      2) 19:19:18  
3) 20:20:19      4) Data inadequate

14. A and B entered into a partnership investing Rs. 16,000 and Rs. 12,000 respectively. After 3 months A withdrew Rs. 5,000 while B invested Rs. 5,000 more. After three months C joins the business with a capital of Rs. 21,000. The share of B exceeds that of C, out of a total profit of Rs. 26,400 after one year by

- 1) Rs. 1,200      2) Rs. 2,400  
3) Rs. 3,600      4) Rs. 4,800

15. Madhu and Sunu entered into a partnership by investing Rs. 12,000 and Rs. 9,000 respectively. After 3 months Sony joined them with an investment of Rs. 15,000. What is the share of Sony in a half yearly profit of Rs. 9,500?

- 1) Rs. 3,500      2) Rs. 3,000  
3) Rs. 2,500      4) Rs. 4,000

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### ANSWERS TO PRACTICE TEST

1. (1)      2. (3)      3. (1)      4. (3)      5. (3)      6. (2)      7. (2)      8.(1)  
9. (4)      10. (1)      11. (1)      12. (1)      13.(2)      14. (3)      15. (3)
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