

1. X and Y invest Rs.21000 and Rs.17500 respectively in a business. At the end of the year, they make a profit of Rs.26400. What is the share of X in the profit?

A. Rs.14400

B. Rs.26400

C. Rs.12000

D. Rs.12500

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**Answer :** Option A

**Explanation :**

Ratio of the investment =  $21000 : 17500 = 210 : 175 = 42 : 35 = 6 : 5$

Share of X in the profit =  $26400 * (6/11) = 2400 * 6 = 14400$

2. X starts a business with Rs.45000. Y joins in the business after 3 months with Rs.30000. What will be the ratio in which they should share the profit at the end of the year?

A. 1:2

B. 2:1

C. 1:3

D. 3:1

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**Answer :** Option B

**Explanation :**

Ratio in which they should share the profit

= Ratio of the investments multiplied by the time period

=  $45000 * 12 : 30000 * 9$

=  $45 * 12 : 30 * 9$

=  $3*12 : 2 * 9$

= 2:1

3. Suresh started a business with Rs.20,000. Kiran joined him after 4 months with Rs.30,000. After 2 months, Suresh withdrew Rs.5,000 of his capital and 2 more months later, Kiran brought in Rs.20,000 more. What should be the ratio in which they should share their profits at the end of the year?

A. 21:32

B. 32:21

C. 12:17

D. 17:12

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**Answer :** Option A

**Explanation :**

Here capital is not the same.

Suresh invest 20000 for initial 6 months and 15000 for the next 6 months.

Hence his term of ratio

$$= (20000 \times 6 + 15000 \times 6)$$

Kiran invest Rs.30000 for 4 months and Rs.50000 for next 4 months.

Hence his term of ration

$$= (30000 \times 4 : 50000 \times 4)$$

$$\text{Suresh : Kiran} = (20000 \times 6 + 15000 \times 6) : (30000 \times 4 : 50000 \times 4)$$

$$= (20 \times 6 + 15 \times 6) : (30 \times 4 + 50 \times 4)$$

$$= (20 \times 3 + 15 \times 3) : (30 \times 2 : 50 \times 2)$$

$$= 105:160$$

$$= 21:32$$

4. Kamal started a business with Rs.25000 and after 4 months, Kiran joined him with Rs.60000. Kamal received Rs.58000 including 10% of profit as commission for managing the business. What amount did Kiran receive?

A. 75000

B. 70000

C. 72000

D. 78000

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**Answer :** Option C

**Explanation :**

$$\text{Ratio of the profits} = 25000 \times 12 : 60000 \times 8$$

$$= 25 \times 12 : 60 \times 8 = 5 \times 3 : 12 : 2 = 5 : 4 \times 2$$

$$= 5:8$$

Let the total profit = x.

Then Kamal received  $10x/100 = x/10$  as commission for managing the business

Remaining profit =  $x - x/10 = 9x/10$  which is shared in the ratio 5:8

Kamal's share =  $x/10 + (9x/10) * (5/13) = 58000$

$\Rightarrow x + 9x(5/13) = 580000$

$\Rightarrow x(1 + 45/13) = 580000$

$\Rightarrow x ( 58/13) = 580000$

$\Rightarrow x ( 1/13) = 10000$

$\Rightarrow x = 130000$

Kiran's share =  $130000 - 58000 = 72000$

5. A and B started a partnership business investing Rs. 20,000 and Rs. 15,000 respectively. C joined them with Rs. 20,000 After six months. Calculate B's share in total profit of Rs. 25,000 earned at the end of 2 years from the starting of the business?

A. 7500

B. 8500

C. 9000

D. 8000

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**Answer :** Option A

**Explanation :**

$A : B : C = 20000*24 : 15000*24 : 20000*18 = 20*4 : 15*4 : 20*3$

$= 4*4 : 3*4 : 4*3$

$= 4:3:3$

B's Share =  $25000 * 3/10 = 7500$

6. A starts a business with a capital of Rs. 85,000. B joins in the business with Rs.42500 after some time. For how much period does B join, if the profits at the end of the year are divided in the ratio of 3 : 1?

A. 5 months

B. 6 months

C. 7 months

D. 8 months

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**Answer :** Option D

**Explanation :**

Let B joins for x months. Then

$$A:B = 85000*12 : x* 42500 = 3 : 1$$

$$\Rightarrow 850*12 : 425x = 3 : 1$$

$$\Rightarrow 850*12/ 425x = 3/1 = 3$$

$$\Rightarrow 850*4 /425x = 1$$

$$\Rightarrow 2*4/x = 1$$

$$\Rightarrow x = 8$$

7. A starts a business with Rs.40,000. After 2 months, B joined him with Rs.60,000. C joined them after some more time with Rs.1,20,000. At the end of the year, out of a total profit of Rs.3,75,000, C gets Rs.1,50,000 as his share. How many months after B joined the business, did C join?

A. 4 months

B. 5 months

C. 6 months

D. 7 months

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**Answer :** Option A

**Explanation :**

Assume that C was there in the business for x months

$$A:B:C = 40000*12 : 60000*10 : 120000*x$$

$$= 40*12 : 60*10 : 120x = 40 : 5*10 : 10x$$

$$= 8 : 10 : 2x$$

$$= 4 : 5 : x$$

$$C's \text{ share} = 375000*x/(9+x) = 150000$$

$$\Rightarrow 375x/(9+x) = 150$$

$$\Rightarrow 15x = 6(9+x)$$

$$\Rightarrow 5x = 18 + 2x$$

$$\Rightarrow 3x = 18$$

$$\Rightarrow x = 18/3 = 6$$



$$(105x * 4) + (105x * 150/100 * 8) : 40x * 12 : 36x : 12$$

$$= 105 + (105 * 3/2 * 2) : 40*3 : 36 * 3$$

$$= 105 * 4 : 40 * 3 : 36 * 3$$

$$= 35 * 4 : 40 : 36$$

$$= 35 : 10 : 9$$

$$\text{B's share} = \text{total profit} * (10/54) = 21,600 * 10/54 = 4000$$

10. A, B and C jointly thought of engaging themselves in a business venture. It was agreed that A would invest Rs. 6500 for 6 months, B, Rs. 8400 for 5 months and C, Rs. 10,000 for 3 months. A wants to be the working member for which, he was to receive 5% of the profits. The profit earned was Rs. 7400. What is the share of B in the profit.

A. 2660

B. 1000

C. 2300

D. 4000

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**Answer :** Option A

**Explanation :**

A is a working member and for that, he receive 5% of the profit

$$= 5\% \text{ of } 7400 = 5*7400/100 = 370$$

$$\text{Remaining amount} = 7400 - 370 = 7030$$

$$\text{Ratio of their investments} = 6500*6 : 8400*5 : 10000*3$$

$$= 65*6 : 84*5 : 100*3 = 13*6 : 84 : 20*3 = 13*2 : 28 : 20$$

$$= 13 : 14 : 10$$

$$\text{Share of B in the profit} = 7030 * (14/37) = 190*14 = 2660$$

11. A, B, C subscribe Rs. 50,000 for a business. If A subscribes Rs. 4000 more than B and B Rs. 5000 more than C, out of a total profit of Rs. 35,000, what will be the amount A receives?

A. 14200

B. 14700

C. 14800

D. 14500

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**Answer :** Option B

**Explanation :**

Total amount invested = 50000

Assume that investment of C = x.

Then investment of B = 5000 + x ,

Investment of A = 4000+5000+x = 9000+x

$$x + 5000+x + 9000+x = 50000$$

$$\Rightarrow 3x + 14000 = 50000$$

$$\Rightarrow 3x = 50000 - 14000 = 36000$$

$$\Rightarrow x = 36000/3 = 12000$$

$$\Rightarrow \text{Investment of C} = x = 12000 ,$$

$$\text{Investment of B} = 5000 + x = 17000,$$

$$\text{Investment of A} = 9000+x = 21000$$

$$\text{Ratio of the investment of A : B : C} = 21000 : 17000 : 12000 = 21 : 17 : 12$$

$$\text{Share of A} = \text{Total Profit} * 21/50 = 35000 * 21/50 = 700*21 = 14700$$

12. A, B, C rent a pasture. If A puts 10 oxen for 7 months, B puts 12 oxen for 5 months and C puts 15 oxen for 3 months for grazing and the rent of the pasture is Rs. 175, then how much amount should C pay as his share of rent?

A. 45

B. 35

C. 55

D. 60

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**Answer :** Option A

**Explanation :**

$$A : B : C = 10 \times 7 : 12 \times 5 : 15 \times 3 = 2 \times 7 : 12 \times 1 : 3 \times 3 = 14 : 12 : 9$$

$$\text{amount that C should pay} = 175 \times (9/35) = 5 \times 9 = 45$$

13. A and B entered into partnership with capitals in the ratio 4 : 5. After 3 months, A withdrew  $\frac{1}{4}$  of his capital and B withdrew  $\frac{1}{5}$  of his capital. At the end of 10 months, the gain was Rs. 760. What is A's share in the profit?

- A. 310  
B. 330  
C. 370  
D. 350

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**Answer :** Option B

**Explanation :**

Ratio of the initial capital of A and B = 4 : 5

Hence we can take the initial capitals of A and B as 4x and 5x respectively

Ratio in which profit will be divided

$$= (4x \times 3) + (3/4) \times (4x) \times 7 : (5x \times 3) + (4/5) \times (5x) \times 7$$

$$= 12 + 21 : 15 + 28$$

$$= 33 : 43$$

$$\text{A's share} = 760 \times 33/76 = 330$$

14. A starts a business with Rs. 3500. After 5 months, B joins with A as his partner. After a year, the profit is divided in the ratio 2 : 3. B's contribution in the capital is

- A. 7000  
B. 8000  
C. 9000  
D. 10000

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**Answer :** Option C

**Explanation :**

Ratio in which profit is divided = 2:3

Assume that B's contribution to the capital = b

$$\Rightarrow 3500 \times 12 : b \times 7 = 2:3$$



$$\Rightarrow 3500 \cdot 12 / 7b = 2/3$$

$$\Rightarrow b = (3500 \cdot 12 \cdot 3) / (2 \cdot 7) = 500 \cdot 6 \cdot 3 = 9000$$

15. A, B and C shared the profit in a business in the ratio 5 : 7 : 8. They had partnered for 14 months, 8 months and 7 months respectively. What was the ratio of their investments?

A. 10:12:14

B. 12:24:28

C. 20:22:12

D. 20:49:64

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**Answer :** Option D

**Explanation :**

Ratio in which A,B and C shared the profit = 5 : 7 : 8

Assume that the ratio of their investment = a:b:c

Then  $14a : 8b : 7c = 5 : 7 : 8$

Good to go, we got the equation. Now it's a matter of time to find a, b and c

$$14a/8b = 5/7$$

$$\Rightarrow 98a = 40b$$

$$\Rightarrow b = 98a/40 = 49a/20 \text{ ---(1)}$$

$$14a/7c = 5/8$$

$$\Rightarrow 2a/c = 5/8$$

$$\Rightarrow 16a = 5c$$

$$\Rightarrow c = 16a/5 \text{ ---(2)}$$

$$a : b : c = a : 49a/20 : 16a/5 = 1 : 49/20 : 16/5 = 20 : 49 : 64$$

16. A and B started a partnership business investing capital in the ratio of 3 : 5. C joined in the partnership after six months with an amount equal to that of B. At the end of one year, the profit should be distributed among A, B and C in --- proportion.

A. 10 : 5 : 4

B. 5 : 3 : 4

C. 3 : 4 : 5

D. 6 : 10 : 5

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**Answer :** Option D

**Explanation :**

Initial investment capital ratio of A and B = 3 : 5

Hence we can assume that initial capital of A and B are 3x and 5x respectively.

Amount that C invest after 6 months = 5x (Since it is equal to B's investment)

Ratio in which profit should be distributed after 1 year =  $3x \cdot 12 : 5x \cdot 12 : 5x \cdot 6$

=>  $3 \cdot 12 : 5 \cdot 12 : 5 \cdot 6$

= 6 : 10 : 5

17. A & B partner in a business , A contribute  $\frac{1}{4}$  of the capital for 15 months & B received  $\frac{2}{3}$  of the profit . For how long B's money was used

A. 12 months

B. 10 months

C. 14 months

D. 16 months

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**Answer :** Option B

**Explanation :**

B received  $\frac{2}{3}$  of the profit

=> A : B = 1 : 2

Let the total capital = x

Then A's capital =  $\frac{x}{4}$

B's capital =  $x - \frac{x}{4} = \frac{3x}{4}$

Assume B's money was used for b months

Then A:B =  $(\frac{x}{4}) \cdot 15 : (\frac{3x}{4}) \cdot b = 1 : 2$

=>  $\frac{15}{4} : \frac{3b}{4} = 1 : 2$

$$\Rightarrow 15 : 3b = 1 : 2$$

$$\Rightarrow 5 : b = 1 : 2$$

$$\Rightarrow 5/b = 1/2$$

$$\Rightarrow b = 5 \times 2 = 10$$

18. A , B , C started a partnership business by investing Rs 27000 , 72000 , 81000 respectively. At the end of the year , the profit were distributed among them. If C's share of profit is 36000, What is the total profit?

A. 80000

B. 90000

C. 70000

D. 120000

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**Answer :** Option A

**Explanation :**

$$A:B:C = 27000:72000:81000$$

$$= 3:8:9$$

Let the total profit= p

$$\text{Then } p * \frac{9}{20} = 36000$$

$$\Rightarrow p = 36000 * \frac{20}{9} = 80000$$

19. A & B started a partnership business. A's investment was thrice the investment of B and the period of his investment was two times the period of investments of B. If B received Rs 4000 as profit , what is their total profit?

A. 28000

B. 30000

C. 32000

D. 34000

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**Answer :** Option A

**Explanation :**

Suppose B's investment = x. Then A's investment= 3x

Suppose Bs period of investment = y, then A's period of investment = 2y

$$A : B = 3x * 2y : xy$$

$$= 6 : 1$$

$$\text{Total profit} * \frac{1}{7} = 4000$$

$$\Rightarrow \text{Total profit} = 4000 * 7 = 28000$$

20. P and Q invested in a business. The profit earned was divided in the ratio 2 : 3. If P invested Rs 40000, the amount invested by Q is

A. 40000

B. 50000

C. 60000

D. 70000

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**Answer :** Option C

**Explanation :**

Let the amount invested by Q = q

$$40000 : q = 2 : 3$$

$$\Rightarrow 40000/q = 2/3$$

$$\Rightarrow q = 40000 * (3/2) = 60000$$

21. A & B start a business jointly. A invests Rs 16000 for 8 month & B remains in a business for 4 months. Out of total profit, B claims 2/7 of the profit . How much money was contributed by B ?

A. 11200

B. 12000

C. 12400

D. 12800

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**Answer :** Option D

**Explanation :**

B's share = 2/7 of the profit

$$\Rightarrow A:B = 5:2$$

(We can easily find out A:B as given above by doing quick mental calculations

and it will be excellent if you can do as much as mental calculations possible.

Just for explanation, see below steps to systematically find out A:B

Let the total profit = x

B's share =  $2x/7$

A's share =  $x - 2x/7 = 5x/7$

A:B =  $5x/7 : 2x/7 = 5:2$

Let the money contributed by B = b

Then A:B =  $16000*8 : b*4 = 5:2$

$\Rightarrow (16000*8)/4b = 5/2$

$\Rightarrow b = (16000*8*2)/(4*5) = 800*8*2 = 12800$

22. A and B starts a business investing Rs.85000 and Rs.15000 respectively. Find out the ratio in which the profit s should be shared.

A. 10:3

B. 17:3

C. 3:10

D. 3:17

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**Answer :** Option B

**Explanation :**

Here A's and B's capitals are there for equal time. Hence

A : B = 85000 : 15000

= 85 : 15

= 17 : 3

23. A , B , C start a business each investing Rs 20,000 . After 5 month A withdraws Rs 5000, B withdraws Rs 4000 & C invests Rs 6000 more . At the end of the year, a total profit of Rs 69900 was recorded . Find the share of A

A. 20600

B. 20700

C. 20500

D. 20400

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**Answer :** Option C

**Explanation :**

$$A : B : C = (20000*5 + 15000*7) : (20000*5 + 16000*7) : (20000*5 + 26000*7)$$

$$= (20*5 + 15*7) : (20*5 + 16*7) : (20*5 + 26*7)$$

$$= 205 : 212 : 282$$

$$A's \text{ share} = 69900 * 205 / (205 + 212 + 282) = 69900 * 205 / 699 = 20500$$

24. A invested Rs 76000 in a business. After few months, B joined him with Rs 57000. The total profit was divided between them in the ratio 2 : 1 at the end of the year. After how many months did B join?

- A. 2  
B. 3  
C. 4  
D. 5

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**Answer :** Option C

**Explanation :**

Assume that B joins for x months . Then

$$A : B = 76000*12 : 57000*x = 2:1$$

$$\Rightarrow 76*12 : 57x = 2:1$$

$$\Rightarrow 76*12/57x = 2/1 = 2$$

$$\Rightarrow x = 76*12/57*2 = 76*4/19*2 = 8$$

Hence B was there in the business for 8 months, or joined after  $12-8 = 4$  months

25. Three partners A , B , C start a business . B's Capital is four times C's capital and twice A's capital is equal to thrice B's capital . If the total profit is Rs 16500 at the end of a year ,Find out B's share in it.

- A. 4000  
B. 5000  
C. 6000  
D. 7000

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**Answer :** Option C

**Explanation :**

Suppose C's capital = x then

B's capital = 4x (Since B's Capital is four times C's capital)

A's capital =  $6x$  ( Since twice A's capital is equal to thrice B's capital)

$$A:B:C = 6x : 4x : x$$

$$= 6 : 4 : 1$$

$$B's\ share = 16500 * (4/11) = 1500*4 = 6000$$

26. In a business, A and C invested amounts in the ratio  $2 : 1$ , whereas the ratio between amounts invested by A and B was  $3 : 2$ . If Rs 157300 was their profit, how much amount did B receive?

A. 48000

B. 48200

C. 48400

D. 48600

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**Answer :** Option C

**Explanation :**

Assume that investment of C =  $x$

Then, investment of A =  $2x$

Investment of B =  $4x/3$

$$A:B:C = 2x : 4x/3 : x = 2 : 4/3 : 1 = 6 : 4 : 3$$

$$B's\ share = 157300 * 4/(6+4+3) = 157300*4/13$$

$$= 12100*4 = 48400$$

27. P, Q and R started a business by investing Rs 120000, Rs 135000 & Rs 150000 respectively. Find the share of each, out of the annual profit of Rs 56700

A. 16800, 18900, 21000

B. 17850, 18900, 21000

C. 16800, 18900, 22000

D. 17850, 18500, 22000

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**Answer :** Option A

**Explanation :**

$$P : Q : R = 120000 : 135000 : 150000 = 120:135:150$$

$$= 24:27:30$$

$$= 8:9:10$$

$$\text{Share of P} = 56700 \times \frac{8}{27} = 2100 \times 8 = 16800$$

$$\text{Share of Q} = 56700 \times \frac{9}{27} = 2100 \times 9 = 18900$$

$$\text{Share of R} = 56700 \times \frac{10}{27} = 2100 \times 10 = 21000$$

28. If  $4 (P's \text{ Capital}) = 6 (Q's \text{ Capital}) = 10 (R's \text{ Capital})$ , then out of the total profit of Rs 4650, R will receive

A. 600

B. 700

C. 800

D. 900

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**Answer :** Option D

**Explanation :**

Let P's capital = p, Q's capital = q and R's capital = r

Then

$$4p = 6q = 10r$$

$$\Rightarrow 2p = 3q = 5r$$

$$\Rightarrow q = \frac{2p}{3}$$

$$r = \frac{2p}{5}$$

$$P : Q : R = p : \frac{2p}{3} : \frac{2p}{5}$$

$$= 15 : 10 : 6$$

$$R's \text{ share} = 4650 \times \left(\frac{6}{31}\right) = 150 \times 6 = 900$$

29. P, Q, R enter into a partnership. P initially invests 25 lakh & adds another 10 lakhs after one year. Q initially invests 35 lakh & withdrawal 10 lakh after 2 years and R invests Rs 30 Lakhs. In what ratio



should the profit be divided at the end of 3 years?

A. 18:19:19

B. 18:18:19

C. 19:19:18

D. 18:19:19

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**Answer :** Option C

**Explanation :**

$$P:Q:R = (25*1+35*2) : (35*2 : 25*1) : (30*3)$$

$$= 95 : 95 : 90$$

$$= 19 : 19: 18$$

30. P , Q, R enter into a partnership & their share are in the ratio  $1/2 : 1/3 : 1/4$  , after two months , P withdraws half of the capitals & after 10 months , a profit of Rs 378 is divided among them . What is Q's share?

A. 114

B. 120

C. 134

D. 144

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**Answer :** Option D

**Explanation :**

The ratio of their initial investment =  $1/2 : 1/3 : 1/4$

$$= 6 : 4: 3$$

Let's take the initial investment of P, Q and R as 6x, 4x and 3x respectively

$$A:B:C = (6x * 2 + 3x * 10) : 4x*12 : 3x*12$$

$$= (12+30) : 4*12 : 3*12$$

$$=(4+10) : 4*4 : 12$$

$$= 14 : 16 : 12$$

$$= 7 : 8 : 6$$

$$B's \text{ share} = 378 * (8/21) = 18 * 8 = 144$$

