



# Selvam College of Technology



An Autonomous Institution

Accredited by NAAC with "A" Grade, UGC Recognized 2(f) Status,  
An ISO 9001:2015 Certified Institution, Approved by AICTE New Delhi, Affiliated to Anna University-Chennai  
PONNUSAMY NAGAR, SALEM ROAD(NH-44), NAMAKKAL-637003. TAMILNADU.  
Mobile: 9942099122, 9942099109, Web: www.selvamtech.edu.in

<b>Name of the Bundle</b>	Advanced Bundle V1	<b>Subject</b>	Aptitude
<b>Topic</b>	Partnership	<b>Last updated on</b>	19 August 2024

## CONCEPT 1 – BASIC PROBLEMS

1) A and B take a grass field on lease for Rs.300 for grazing their animals. If A grazes 10 animals for 5 weeks and B grazes 15 animals for 7 weeks. The ratio in which they should divide the rent is \_\_\_\_\_.

- a) 1 : 2
- b) 10 : 21
- c) 11 : 20
- d) 2 : 1

**ANS: b) 10:21**

**Explanation:**

$$\begin{array}{c} A : B \\ 2 \quad 3 \\ 10 \times 5 : 15 \times 7 \\ 10 : 21 \end{array}$$



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## CONCEPT 2 - PROFIT = CAPITAL \* TIME

2) Two partners X and Y start a business by investing Rs.50,000 and Rs.40,000 respectively. What will be the ratio of their profits at the end of the year?

- a) 5 : 4
- b) 3 : 6
- c) 4 : 5
- d) 6 : 3

**ANS: a) 5 : 4**

**Explanation:**

CAPITAL X : Y = 50,000 : 40,000 = 5 : 4.

$$\begin{array}{r}
 \text{CAPITAL} \\
 \text{TIME}
 \end{array}
 \begin{array}{c}
 X : Y \\
 * \left( \begin{array}{c} 5 : 4 \\ 1 : 1 \end{array} \right) *
 \end{array}$$


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**PROFIT** **5 : 4**

**Note :** Always remember when time is the same the profit will be divided in the ratio of their capitals.



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3) Sujitha and Indira started a business by investing 36,000 and 63,000. Find the share of each, out of the annual profit of 5500.

- (a) 2000, 3500
- (b) 2500, 3500
- (c) 3500, 2500
- (d) None of these

**ANS: a) 2000, 3500.**

**Explanation:**

CAPITAL Sujitha : Indira = 36,000 : 63,000 = 4 : 7.

Sujitha : Indira

CAPITAL

TIME

$$* \begin{pmatrix} 4 & : & 7 \\ 1 & : & 1 \end{pmatrix} *$$

**PROFIT**

**4 : 7**

**Note :** Always remember when time is the same the profit will be divided in the ratio of their capitals.

Total Profit = 11 units = 5500.

4 Units = 2000.

7 units = 3500.



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4) X starts a business with Rs.25,000. After 4 months Y joins him with Rs.20,000. What will be the ratio of their profit at the end of the year?

- a) 4 : 8
- b) 5 : 10
- c) 15 : 8
- d) 9 : 18

**ANS: c) 15 : 8**

**Explanation:**

CAPITAL X : Y = 25,000 : 20,000 = 5 : 4.

TIME X : Y = 12 Months : 8 Months = 3 : 2.

$$\begin{array}{r}
 \text{CAPITAL} \\
 \text{TIME}
 \end{array}
 \times \begin{array}{c}
 \text{A : B} \\
 \left( \begin{array}{c} 5 : 4 \\ 3 : 2 \end{array} \right) *
 \end{array}$$


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**PROFIT** **15 : 8**



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5) A, B and C invested in the ratio 1 : 2 : 3; the timing of their investments being in the ratio 1 : 2 : 3. In what ratio would their profit be distributed?

- a) 3 : 2 : 1
- b) 1 : 2 : 3
- c) 1 : 4 : 9
- d) 9 : 4 : 1

**ANS: c) 1 : 4 : 9**

**Explanation:**

$$\begin{array}{l} \text{CAPITAL} \\ \text{TIME} \end{array} \quad * \quad \begin{array}{c} \text{A : B : C} \\ \left( \begin{array}{c} 1 : 2 : 3 \\ 1 : 2 : 3 \end{array} \right) * \end{array} \\ \hline \text{PROFIT} \quad \quad \quad 1 : 4 : 9$$



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6) A , B and C invested in the ratio 2 : 5 : 7; the timing of their investments being in the ratio 3 : 4 : 5. In what ratio would their profit be distributed

- a) 2 : 10 : 15.
- b) 15 : 10 : 2.
- c) 6 : 20 : 35.
- d) 6 : 20 : 15.

**ANS: c) 6 : 20 : 35.**

**Explanation:**

$$\begin{array}{l} \text{CAPITAL} \\ \text{TIME} \end{array} \quad \begin{array}{c} \text{A : B : C} \\ * \left( \begin{array}{c} 2 : 5 : 7 \\ 3 : 4 : 5 \end{array} \right) * \end{array}$$

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**PROFIT**                      **6 : 20 : 35**



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7) A, B and C invested capital in the ratio 4 : 6 : 9. At the end of the business term, they received the profits in the ratio 2 : 3 : 5. Find the ratio of time for which they contributed their capitals.

- a) 6 : 5 : 8.
- b) 6 : 5 : 9.
- c) 10 : 12 : 9.
- d) 18 : 18 : 20.

**ANS: d) 18 : 18 : 20 .**

**Explanation:**

	A : B : C
CAPITAL	4 : 6 : 9
PROFIT	2 : 3 : 5
<hr/>	
TIME	$\frac{2}{4} : \frac{3}{6} : \frac{5}{9}$
	$\frac{1}{2} : \frac{1}{2} : \frac{5}{9}$
	<b>9 : 9 : 10</b>

According to the options, option d) 18:18:20 is the answer.



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8) A,B and C invest their capitals in a business. If the ratio of their periods of investments are 2 : 3 : 6 and their profits are in the ratio of 4 : 5 : 6. Find the ratio in which the investments are made by A,B and C.

- a) 9 : 10 : 12.
- b) 4 : 5 : 6.
- c) 8 : 5 : 12.
- d) 6 : 5 : 3.

**ANS: d) 6 : 5 : 3.**

**Explanation:**

	<b>A : B : C</b>
<b>TIME</b>	<b>2 : 3 : 6</b>
<b>PROFIT</b>	<b>4 : 5 : 6</b>
<hr/>	
<b>CAPITAL</b>	$\frac{4}{2} : \frac{5}{3} : \frac{6}{6}$
	$2 : \frac{5}{3} : 1$
	<b>6 : 5 : 3</b>





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## CONCEPT 3 - JOINING / WITHDRAWING AFTER X MONTHS.

9) A starts a business with 50,000. After 3 months B joins him with 70,000. At the end of the year, in what ratio should they share the profit ?

- a) 12 : 13
- b) 13 : 12
- c) 11 : 15
- d) 20 : 21

**ANS: d) 20 : 21**

**Explanation:**

CAPITAL A : B = 50,000 : 70,000 = 5 : 7.

TIME A : B = 12 Months : 9 Months = 4 : 3.

$$\begin{array}{r}
 \text{CAPITAL} \\
 \text{TIME}
 \end{array}
 \begin{array}{c}
 \text{A : B} \\
 * \left( \begin{array}{c} 5 : 7 \\ 4 : 3 \end{array} \right) *
 \end{array}$$


---

**PROFIT** **20 : 21**



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10) X and Y are partners in a business. They invest in the ratio 5 : 6, at the end of 8 months X withdraws. If they receive profits in the ratio 5 : 9. Find how long Y's investment was used?

- a) 12 months
- b) 10 months
- c) 15 months
- d) 14 months

**ANS: a) 12 months .**

**Explanation:**

	<b>X : Y</b>
<b>CAPITAL</b>	<b>5 : 6</b>
<b>PROFIT</b>	<b>5 : 9</b>
<hr/>	
<b>TIME</b>	<b><math>\frac{5}{5} : \frac{9}{6}</math></b>
	<b><math>1 : \frac{3}{2}</math></b>
	<b>2 : 3</b>

**TIME**      **X : Y = 8 Months : X Months = 2 : 3.**

**2 Units – 8 months;**

**3 Units – 12 months.**



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11) X and Y enter into a partnership with their capitals in the ratio 7 : 9. At the end of the 8th month, X withdraws his capital. If they receive the profits in the ratio 8 : 9, Find how long Y's capital was used.

- a) 4 months
- b) 6 months
- c) 7 months
- d) 8 months

**ANS: c) 7 months.**

**Explanation:**

TIME      X : Y = 8 Months : X Months = 2 : 3

2 Units – 8 months;

	X : Y
CAPITAL	7 : 9
PROFIT	8 : 9
TIME	$\frac{8}{7} : \frac{9}{9}$
	8 : 7

TIME      X : Y = 8 Months : X Months = 8 : 7.

8 Units – 8 months;

7 Units – 7 months.



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12) X started a business by investing Rs. 2700. After sometime Y joined him by investing Rs. 2025. At the end of one year, the profit was divided in the ratio 2 : 1. After how many months did Y join the business?

- a) 4 Months.
- b) 6 Months.
- c) 3 Months.
- d) 2 Months.

**ANS: a) 4 Months.**

**Explanation:**

CAPITAL X : Y = 2700 : 2025 = 4 : 3.

	X : Y
CAPITAL	4 : 3
PROFIT	2 : 1
<hr/>	
TIME	$\frac{2}{4} : \frac{1}{3}$
	3 : 2

TIME X : Y = 12 Months : X Months = 3 : 2.

3 Units – 12 months;

2 Units – 8 months.(Time period in which Y invested )

Therefore, After 4 months Y joined.



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13) A started a business with Rs.45,000 and B joined afterwards with Rs.30,000. If the profit at the end of the one year was divided in the ratio 2 : 1 respectively, then B would have joined A for business after.

- a) 1 month.
- b) 2 months.
- c) 3 months.
- d) 4 months.

**ANS: c) 3 months.**

**Explanation:**

CAPITAL A : B = 45,000 : 30,000 = 3 : 2.

	<b>A : B</b>
<b>CAPITAL</b>	<b>3 : 2</b>
<b>PROFIT</b>	<b>2 : 1</b>
<hr/>	
<b>TIME</b>	<b><math>\frac{2}{3} : \frac{1}{2}</math></b>
	<b>4 : 3</b>

TIME A : B = 12 Months : X Months = 4 : 3.

4 Units – 12 months;

3 Units – 9 months.(Time period in which Y invested )

Therefore, After 3 months B joined.



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14) A started a business by investing Rs.36,000. After 4 months B joined her with some investment. At the end of the year, the total profit was divided between them in the ratio 9 : 7. How much capital was invested by B in the business?

- a) 40,000.
- b) 42,000.
- c) 41,000.
- d) None of these

**ANS: b) 42,000.**

**Explanation:**

Time A : B = 12 months : 8 months = 3 : 2.

	A : B
TIME	3 : 2
PROFIT	9 : 7
<hr/>	
CAPITAL	$\frac{9}{3} : \frac{7}{2}$
	6 : 7

CAPITAL A : B = 36,000 : Rs.X = 6 : 7.

6 Units – Rs.36,000 ;

7 Units – Rs.42,000.



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15) A starts a business with 21,000/- and later on B joins him with 36,000/- After how many months did B join if the profit is distributed in an equal ratio?

- a) 5 months
- b) 7 months
- c) 6 months
- d) 9 months

**ANS: a) 5 months**

**Explanation:**

CAPITAL A : B = 21,000 : 36,000 = 7 : 12.

	A : B
CAPITAL	7 : 12
PROFIT	1 : 1

---

**TIME**  $\frac{1}{7} : \frac{1}{12}$

**12 : 7**

TIME X : Y = 12 Months : X Months = 12 : 7.

12 Units – 12 months;

7 Units – 7 months.

Therefore, After 5 months B joined.