PARTNERSHIP

[साझेदारी]

1. (a)

	A	:	B
Capital →	36,000	:	63,000
	4	:	7

Note → When time is same then profit will divided in the ratio of their capital. (जब समय समान हो तो लाभ दोनों की पूंजी के अनुपात में बटेगा)

∴ (4 + 7) units = Rs 5500

11 units = Rs 5500

1 unit = Rs $\frac{5500}{11}$ = Rs 500

Share of A (A का हिस्सा)

= 500 × 4 = Rs 2000

Share of B (B का हिस्सा)

= 500 × 7 = Rs 3500

2. (d)

	A	:	B
Capital ⟶	50,000		70,000
	5	:	7
Time ⟶	12		9
Profit ⟶	60	:	63
	20	:	21

Required Ratio of profits (लाभ का अभिष्ट अनुपात)

= 20 : 21

3. (b) Let the capital invested by B (माना B द्वारा लगाई गई पूंजी) = x रुपये

	A	:	B
Capital ⟶	36,000		x
Time ⟶	12	:	8
	3	:	2
Profit ⟶	108,000	:	$2x$

According to the question,

$\frac{108,000}{2x} = \frac{9}{7}$

$x = \frac{108,000}{18}$ = 42,000

Required investement by B (B द्वारा लगाई गई पूंजी)

= Rs 42000

Alternate : Note :- To save your valuable time in such type of question try to use below given formula.

$\frac{C_1 \times T_1}{C_2 \times T_2} = \frac{P_1}{P_2}$

Where C_1 and C_2 are the capitals.

(जहां C_1 तथा C_2 पूंजी है)

T_1 and T_2 are profits. (T_1 तथा T_2 समयावधि है)

P_1 and P_2 are profits. (P_1 तथा P_2 समयावधि है)

Let capital invested by B (B द्वारा लगाई गई पूंजी) = Rs. x

$\frac{36000 \times 12}{x \times 8} = \frac{9}{7}$

x = **Rs 42000**

4. (a) According to the question,

(312 + 144 + 25T) Units = 15, 453

1 unit = $\frac{15,453}{(456 + 25T)}$

Share of C (c का हिस्सा)

= $\frac{15,453}{(456 + 25T)}$ × 25T

$\frac{15,453}{(456 + 25T)}$ × 25T = 3825

Note : Because C's share = Rs 3825.

101T = 456 + 25T

76 T = 456

T = 6 months

Required time (अभीष्ट समय) = (9 – 6) = 3 months

Therefore C joined 3 months later than B joined (अत: C ने B से 3 महीने बाद पूंजी लगाई)

5. (c) Note : We can assume values as per our need but the ratio of values should not be chnaged (हम अपनी सुविधा अनुसार कुछ भी मात्रा मान सकते है लेकिन अनुपात समान रहना चाहिए)

	A	:	B	:	C
Initial capital →	$2x$	:	$4x$	:	$8x$

Total capital invested by A (A द्वारा लगाई गई पूंजी)

$= (2x \times 6 + 3x \times 6) = 30x$

Total capital invested by B (B द्वारा लगाई गई पूंजी)

$= (4x \times 6 + 8x \times 6) = 72x$

Total capital invested by C (C द्वारा लगाई गई पूंजी)

$= (6 \times 8x + 6x \times 6)$

$= (48x + 36x) = 84x$

New ratio of capitals : (पूंजी का नया अनुपात)

	A	:	B	:	C
Capital ⟶	$30x$	:	$72x$	:	$84x$
Profit ⟶	5	:	12	:	14

Note : Profit would be divided in the ratio of their capitals. (लाभ पूंजी के अनुपात में बटेगा)

Required ratio of their profit (लाभ का अभिष्ट अनुपात) = 5 : 12 : 14

6. (a)

	A	:	B
Capital ⟶	52,000		39,000
	4	:	3
Profit ⟶	12	:	8
	3	:	2
Profit ⟶	12	:	6
	2	:	1

Let profit of A (माना A का लाभ) = 200

and profit of B (माना B का लाभ) = 100

Total profit (कुल लाभ) = 300 units

For running business B received (व्यवसाय चलाने के लिए B द्वारा ज्ञात राशि)

$= \frac{300 \times 25}{100}$ = 75 units

Note : Remaining profit will be divided in the ratio of their capitals. (शेष लाभ पूंजी के अनुपात में बटेगा)

$\therefore$ Profit of A = $\frac{225}{3} \times 2$

= 150 units

Profit of B = $\frac{225}{3} \times 1$ = 75 units

Total profit of B (B का कुल लाभ)

= (75 + 45) = 150 units

According to the question,

150 units = Rs 20,000

1 unit = Rs $\frac{20,000}{150}$

150 units = Rs $\frac{20,000}{150} \times 150$

= Rs 20,000

7. (c) Let the total profit (माना कुल लाभ)

= Rs k

According to the question,

Remaining profit after paying 20% working partner's commission (काम करने वाले पार्टनर को 20% कमीशन देने के बाद बचा लाभ) = (k – 8000)

$\therefore (k - 8000) \times \frac{20}{100} = 8000$

k = 48000

$\therefore$ Total profit = **Rs 48000**

8. (d)

	P	:	Q	:	R
Capital ⟶	1	:	$\frac{3}{2}$	:	2
Profit ⟶	2	:	3	:	4

Note : Profit would be divided in the ratio of their capitals. (लाभ पूंजी के अनुपात में बटेगा)

Profit = $(2x + 3x + 4x) = 9x$ units

According to the question,

$9x = 9,00,000 \times \frac{80}{100}$

$9x = 7,20,000$

$x = 80,000$

Profit of P = $2x = 2 \times 80,000$ = Rs 1,60,000

Profit of Q = $3x = 3 \times 80,000$ = Rs 2,40,000

Profit of R = $4x = 4 \times 80,000$ = Rs 3,20,000

9. (c) Let the share of A (माना A का हिस्सा) = x

According to the question,

	A	:	B	:	C
Capital →	x		$2x$		$(4x-50)$

$(x + 2x + 4x - 50) = 13,950$

$7x - 50 = 13,950$

$7x = 14000$

$x = 2000$

Share of A = **Rs 2000**

10. (c) Capital of A (i) Rs 45000

Capital of B (ii) Rs 30,000

Ratio of $P_1 : P_2 = 2 : 1$

Now by using formula,

$\frac{C_1 T_1}{C_2 T_2} = \frac{P_1}{P_2}$

$$\frac{45000 \times 12}{30000 \times T_2} = \frac{2}{1}$$

$T_2 = 9$

Then B would join business after (अत: B व्यवसाय में निवेश करता है) (12 – 9)

= 3 months

11. (a) Let Y's investment is used for T months (माना Y की पूंजी T महीनों के लिए इस्तेमाल की गई) → Now by using formula.

$$\frac{5 \times 8}{6 \times T_2} = \frac{5}{9}$$

T = 12 months

12. (d)

	M	N	O	P
No. of lows →	16	20	18	42
Time →	3	4	6	2
Ratio of Rent →	48 :	80	108	84
	12 :	20	27	21

According to the question,
12 unit = Rs 2400

1 unit = Rs $\frac{2400}{12}$

27 units = Rs $\frac{2400}{12} \times 27$ = **Rs 5400**

13. (c) Let C subscribes the business (माना C ने निवेश किया) = x रुपये

	A	:	B	:	C
Capital →	$(x + 12000)$	:	$(x + 5000)$	:	x

Note : Profit would be divided in the ratio of their capitals. (लाभ पूंजी के अनुपात में बटेगा)

According to the question,

$(x + 12000) + (x + 5000) + x = 47000$

$3x + 17000 = 47000$

$3x = 30000$

$x = 10,000$

	A	:	B	:	C
Capital →	22,000	:	15000	:	10000
Profit →	22	:	15	:	10

(22 + 15 + 10) units = 4700

1 unit = $\frac{4700}{47} = 100$

Share of C = 10 units = 10 × 100 = **Rs 1000**

14. (b)

A	:	B + C	
$1_{\times 5}$	:	$2_{\times 5}$	.....(I)
B	:	A + C	
$1_{\times 3}$	:	$4_{\times 3}$	.....(II)

Note : The total sum of A, B and C will be same.

So equate the sum of both the equations.

After that new ratio, (A, B तथा C का कुल धन बराबर है अत: दोनों समीकरणों को बराबर करने के बाद नया अनुपात है)

A	:	B + C	
5	:	10	.....(III)
B	:	A + C	
3	:	12	.....(IV)

From equation (iii) and (iv)

A	:	B	:	C
5	:	3	:	7

According to the question,
(5 + 3 + 7) units = Rs 11250
15 units = Rs 11250
1 unit = Rs 750
Differences in shares of A and B (A तथा B के हिस्से में अंतर)
= (5 – 3) × 750
= **1500 Rs**

15. (a)

	X	:	Y
Capital →	50,000	:	40,000
Time →	1	:	1
Profit →	50,000	:	40,000

Note: Always remembers when time is same the profit will be divided in the ratio of their profit. (जब भी समय समान होता है तो लाभ पूंजी के अनुपात में बटता है)

16. (c)

	X	:	Y
Capital →	25,000	:	20,000
	5	:	4
Time →	12	:	8
Profit →	60	:	32
	15	:	8

∴ Hence Required ratio (अभीष्ट अनुपात)
= **15 : 8**

17. (a) Capital of A (A की पूंजी) = 21,000 Rs
Capital of B (B की पूंजी) = 36,000 Rs
By using formula,

$$\frac{C_1 \times T_1}{C_2 \times T_2} = \frac{P_1}{P_2}$$

$$\frac{21000 \times 12}{36000 \times T_2} = \frac{1}{1}$$

T_2 = 7 months

$\therefore$ So B joined business after (तो B ने व्यवसाय में निवेश किया)

(12 – 7 = 5) months

18. (b)

	A		B
Capital →	1,85,000	:	2,25,000
Profit →	37	:	45
	↓ ×200		↓ ×200
	7400		9000

Total Profit = (7400 + 9000) = **Rs 16400**

19. (d)

	A		B
Capital →	35,000	:	56,000
Profit →	5	:	8
	↓ ×900		↓ ×900
	4500		7200

Total Profit = (45000 + 72,000)

= **Rs 1, 17, 000**

20. (d)

	A	:	B
	40,000	:	75,000
	8	:	15
Time ⟶	5	:	5
Profit ⟶	8	:	15

Note: If time is same then ratio of their profit will be divided in the ratio of their capital. (जब भी समय समान होता है तो लाभ पूंजी के अनुपात में बटता है)

$\because$ (8 + 15) units = Rs 46,000

23 units = Rs 46,000

1 unit = Rs 2,000

15 units = 8 × 2,000 = Rs **16,000**

$\because$ Share of A (A का हिस्सा) = Rs **16,000**

21. (c)

	A	:	B
Capital →	25,000	:	30,000
	5 ×	:	6 ×
Time ⟶	2	:	1
Profit ⟶	10	:	6

According to the question,

(5 + 3) units = Rs 46,000

1 unit = Rs $\frac{46000}{8}$

3 units = Rs $\frac{46000}{8} \times 3$

= Rs **17,250**

Hence share of B (B का हिस्सा)

= Rs **17,250**

22. (b) Total investment of A in 4 years (4 वर्षों में A का कुल निवेश)

= 40,000 + 50, 000+ 60, 000 + 70,000

= 22,00,000

Total investment of B in 2 years (2 वर्षों में B का कुल निवेश)

= 85,000 × 2 = 170, 000

	A	:	B
Capital →	22,0000	:	170,000
Profit →	22	:	17

According to the question,

(22 + 17) units = Rs 1,95,000

39 units = Rs 1,95,000

39 units = Rs $\frac{1,95,000}{39} \times 22$

= **Rs 1,10,000**

23. (c) Let the Y's capital was used for T months (माना Y की पूंजी T महीनों के लिए इस्तेमाल की गई)

According to the question,

$$\frac{7 \times 8}{9 \times T} = \frac{8}{9}$$

T = **7 months**

Hence capital of Y was used for 7 months (अत: Y की पूंजी 7 महीनों के लिए इस्तेमाल की गई)

24. (d) Let the capitals of Y was used for T months (माना Y की पूंजी T महीनों के लिए इस्तेमाल की गई)

According to question.

$$\frac{5 \times 8}{6 \times T} = \frac{5}{9} = T = \textbf{12 months}$$

Hence capital of Y was used for = 12 months

25. (b)

	1st partner	:	2nd partner
Capital ⟶	125,000	:	85,000
	25	:	17
	8		

According to the question,

Note : 60% of profit should be divided equally between them (अत: 60% लाभ उनके बीच बराबर बटेगा)

8 units = Rs 300

1 unit = $\frac{300}{8}$

42 units = $\frac{300}{8} \times 42$

$\therefore$ 40% of profit = Rs $\frac{300}{8} \times 42$

Total Profit = Rs $\frac{300 \times 100}{8 \times 40} \times 42$

= Rs **3937.50**

26. (d)

	Ist Brother	:	2nd Brother
Capital →	50,000	:	70,000
	5	:	7
		+2	

= 57 units

According to the question,

57 units = Rs 8550

1 unit = $\frac{8550}{57}$

100 units = $\frac{8550}{57} \times 100$ = Rs **15000**

Alternate :

X	:	**Y**
3	:	2

3 units = Rs 8550

1 unit = Rs $\frac{8550}{57}$ = Rs 2850

5 units = 2850 × 5 = **Rs 14250**

Note : 5% of total profit is donated (लाभ का 5% दान में दिया जाता है)

$\therefore$ 95% of total profit = Rs 14250

1% of total profit = Rs $\frac{14250}{95}$

100% of total profit

= Rs $\frac{14250}{95} \times 100$

= **Rs 15,000**

27. (b) Let the total profit = 100 units

Remaining profit after donation (दान देने के बाद बचा लाभ) = $100 - \frac{100 \times 5}{100}$

= 95 units

$\therefore$ Share of X = $\frac{95}{(3+2)} \times 3$

= 57 units

According to the question,

57 units = Rs 8550

1 unit = $\frac{8550}{57} \times 100$ = **Rs 15000**

Alternate :

X	:	**Y**
3	:	2

3 units = Rs 8550

1 unit = Rs $\frac{8550}{57}$ = Rs 2850

5 units = 2850 × 5 = **Rs 14250**

Note : 5% of total profit is donated (लाभ का 5% दान में दिया जाता है)

$\therefore$ 95% of total profit = Rs 14250

1% of total profit = Rs $\frac{14250}{95}$

100% of total profit

= Rs $\frac{14250}{95} \times 100$

= **Rs 15,000**

28. (a)

	A	:	B	:	C
Capital →	5	:	6	:	8
Time →	1	:	1	:	3
			2	:	2
Profit →	5	:	3	:	12

Note : (i) We know

Profit = Time × Capital invested

(ii) In such type of questions we should assume value of time as they can satisfy the ratio of profit. (इस प्रकार के प्रश्नों में हम समय का ऐसा मान रखते है जो लाभ के अनुपात को संतुष्ट करता है)

$\therefore$ Required ratio of Time (समय का अभीष्ट अनुपात) = $1 : \frac{1}{2} : \frac{3}{2}$

= 2 : 1 : 3

Alternate :-

Profit = Time × Capital Invested

Time = $\frac{\text{Profit}}{\text{Capital Invested}}$

Required ratio of time = $\frac{5}{5} : \frac{3}{6} : \frac{12}{8}$

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

= 2 : 1 : 3

29. (a) Total capital invested by X in a year (X द्वारा एक साल में निवेशित पूंजी)

= 16,000 × 3 + 11000 × 9 = Rs 147,000

Total capital invested by Y in a year (Y द्वारा

एक साल में निवेशित पूंजी)

= 12000 × 3 + 17000 × 9

= Rs 189,000

Money invested by Z = 21,000 × 6

= Rs 126,000

	X	:	Y	:	Z
Capital →	147	:	187	:	126
	7	:	9	:	6

According to the question,

(7 + 9 + 6) units = Rs 26,400

1 unit = Rs $\frac{26,400}{22}$

= Rs 1,200

Required difference (अभीष्ट अंतर) = (9 – 6) × 1200 = **Rs 3600**

30. (a) According to the questions,

	X	:	Y	:	Z
Capital →	6	:	3	:	1
		×2		×3	

∴ Required ratio of capital

= **6 : 3 : 1**

31. (A)

X	:	Z
$2_{\times 3}$	:	$1_{\times 3}$
X	:	Y
$3_{\times 2}$	:	$2_{\times 2}$

Note : X will be same in both cases, hence new required ratio (X दोनों स्थितियों में समान है अत: नया अनुपात)

X	:	Y	:	Z
6	:	4	:	3

According to the question,

(6 + 4 + 3) units = Rs 1,57,300

13 units = Rs 1,57,300

1 unit = Rs 1, 21, 00

4 units = 1, 2100 × 4

= Rs **48,400**

∴ Share of Y = **Rs 48,400**

32. (a) Let the total time (माना कुल समय) = 8 years

Let the total capital (माना कुल पूंजी)

= 20 units

	X	:	Y	:	Z
Capital →	5	:	4	:	11
Time →	2	:	4	:	8
Profit →	10	:	16	:	88
	5	:	8	:	44

According to the question,

(5 + 8 + 44) units = Rs 1140

57 units = Rs 1140

1 unit = Rs $\frac{1140}{57}$ = **Rs 20**

Profit of X = 20 × 5 = Rs 100

Profit of Y = 20 × 8 = Rs 160

Profit of Z = 20 × 44 = Rs 880

33. (c) Let total profit (माना कुल लाभ)

= 24 units

Profit of A = $\frac{1}{8}$ × 24 = 3 units

Profit of B = $\frac{1}{3}$ × 24 = 8 units

	A	:	B	:	C
Capital →	x	:	y	:	1560
Time →	4	:	6	:	8
Profit →	3	:	8	:	13 [24 – (8+3)]

We know,

Capital × Time = Profit

$\frac{\text{Profit}}{\text{Time}}$ = Capital

∴ $\frac{13}{8}$ units = 1560

1 unit = Rs 960

y = Rs 1260

x = $\frac{3}{4}$ × 960 = Rs 720

Capital of A = Rs 720

Capital of B = Rs 1280

34. (d) Let the captial (माना कुल पूंजी) = 18 units

Let the time (माना कुल समय) = 6 years

	X	:	Y	:	Z
Capital →	3	:	6	:	9
		×1		×2	×3
Time →	1	:	2	:	6
Profit →	3	:	12	:	54
	1	:	4	:	18

According to the question,

(1 + 4 +18) units = Rs 23000

23 units = Rs 23000

1 unit = Rs 1000

4 units = Rs 1000 × 4 = Rs 4000

Share of Y is Rs 4,000

35. (b)

A	:	B
4	:	5

According to the question,

(4 + 5) units = Rs 14,130

1 unit = Rs $\frac{14,130}{9}$ = Rs 1570

5 units = 5 × 1570 = Rs 7850

Hence share of B (B का हिस्सा)

= **Rs 7850**

36. (b) Total Rent = Rs 300

	X		Y
No of animals	10		15
		×	
Time (in weeks)			
Ratio of Rent	5		7
	50	:	105
	10	:	21

37. (a) Initial Ratio of investements by A and B (A तथा B कि पूंजी का आरंभिक अनुपात) = 2 : 3

Let their respective investement are 2x and 3x

According to question

If A added Rs 10000 to his investment

Then New Ratio (यदि A ने 10 हजार और निवेश किए तो नया अनुपात) = 3 : 2

$$\frac{2x+10,000}{3x} = \frac{3}{2}$$

$$4x + 20,000 = 9x$$

$$5x = 20000$$

$$x = \text{Rs } 4000$$

⇒ Original investment by A (A का वास्तविक निवेश) = 2 × 4000 = Rs 8000

Alternative

A	:	B
2×2	:	3×2
3×3	:	2×3

Note : We know A has an additional amount. So amount of B would be same (A का वास्तविक रहेगी)

After that new Ratio

	A	:	B
+5	4	:	6
	9	:	6

According to the question

5 units = **Rs 10,000**

1 unit = Rs 2,000

Initial capital of A (A का आरंभिक निवेश)

= 2000 × 4 = Rs 8000

38. (d) Let Capital be Rs 11x and Y's capital be Rs 12x and let time for which Y invested capital is T_2 months (माना कि पूंजी 11x तथा Y की पूंजी तथा समय क्रमशः 12x तथा T_2 है)

By using formulas,

$$\frac{C_1 \times T_1}{C_2 \times T_2} = \frac{P_1}{P_2}$$

$$\frac{11x \times 8}{12x \times T_2} = \frac{2}{3}$$

T_2 = 11 months

Hence the time for which Y invested his capital is 11 months (अतः Y ने 11 महीनों के लिए पूंजी निवेश की)

39. (c) Total investment by A, B and C (A, B तथा C द्वारा कुल निवेश) = Rs 47,000

Let amount invested by C (माना B की पूंजी) = रु x

then amount invested by B (माना A की पूंजी) = रु (x + 3000 + 5000) [given] According to question

x + (x + 3000) + (x + 3000 + 5000) = 47000

3x + 11000 = 47000

3x + 36000

x = रु 12000

	A		B		C
Ratio of	(x + 800)	:	(x + 3000)	:	12000
Amount	(12000 + 8000)	:	(1200 + 3000)	:	12000
	20,000	:	15	:	12

Since the time ofr which the amounts were invested was same for all partners the ratio of amounts will be the ratio of profits (जब भी समय समान होता हे तो राशि लाभ के अनुपात में होगी) Share of A total profit (A का हिस्सा)

$$= \frac{14100}{20+15+12} \times 20 = \text{रु } 6000$$

40. (b) Total cost of thing a car = रु 4, 160

According to question,

Time of using car $\frac{A}{7}\ \frac{B}{8}\ \frac{C}{11}$ in hours

Here the ratio of time will be the ratio of rent each person has to pay (यहाँ समय का अनुपात प्रत्येक व्यक्ति द्वारा भरे गए किराया ाक अनुपात होगा)।

$\Rightarrow$ ratio of rents 7 : 8 : 11 to be paid

Rent shared by A(A द्वारा दिया गया किराया) = $\frac{4160 \times 7}{7+8+11}$ = रु 1120

42. (c) Let total profit = 16 units According to question Profit share of A (A का हिस्सा) = $\frac{3}{16} \times 16$ units

Profit share of C (C का हिस्सा) = $\frac{1}{4} \times 16 = 4$ units

then profit share of C (C का हिस्सा) = [16 - (4+3)]

= 9 units

But profit of C = रु 243 [given]

9 units = रु 243

1 units = रु 27

Profit share of B (B का लाभ) = 4 units

= 27 × 4 = रु 108

43. (c) Total profit = रु 880

Since A gets 15% of total profit for management (A को लाभ का 15% व्यवसाय सभांलने के लिए मिलता है)

$\therefore$ Remanining profit = $880 - \frac{880 \times 15}{100}$

= रु 748

	A	B
Amounts	5,000	6,000
Ratio of Capital	5	6

The remaining profit is being divided in the ratio of capital (बचा लाभ) A's share of capital (लाभ में A का हिस्सा)

= $\frac{748}{5+6} \times 5$ = रु 340

Total profit Received by A (A का कूल लाभ)

= 340 + 132 = रु 472

44. (b)

	A	B	C
Amounts invested	14,000		
time (in months)	12	7	5
1,68,000			
Ratio of profits	4	3	2
Let their profits are	4x	3x	2x

4x = 1,68,000

$\frac{168000}{4}$ = 42,000

$\Rightarrow$ Capital invested by C (C का हिस्सा)

= $\frac{84000}{5}$

= रु 16,800

45. (b) Let total capital of A,B and C (A,B कि कुल पूंजी) = 15 units

Let total time for investment (माना कुल समय) = 12 units

Now, According to question

	A	B	C
Capitals	$\frac{1}{3} \times 15$units	$\frac{1}{5} \times 15$units	

	A	B	C
Time Ratio of time	$\frac{1}{4} \times 12$ units (5)	$\frac{1}{6} \times 12$ units (3)	12 units (7)
	3	2	12
	15	6	84
Ratio of profits	5 :	2 :	28

Total profit = 5 + 2 + 28 = 35 units also total profits = रु 1820 (Given)

35 units = रु 1820

1 units = $\frac{1820}{35}$ = रु 52

Hence A's share in profit (अत: A का लाभ)

= 5 units = 52 × 5 = रु 260

46. (c) Let ratio of profit of A and B is a : b.

$\therefore$ Ratio of profit of B and C = a : B

A : B : C

a_{xa} : b_{xa} : b_{xb}

Note: Value of B would be same in both cases (दोनों स्थितियों में B का मान समान रहेगा)

A : B : C

a^2 : ab : b^2

According to the question,

a^2 = 6400

a = 80

Simlarly b^2 = 10.000

$\Rightarrow$ b = 100

Amount recived by B (B का मिली राशि)

= ab = 80 × 100

= रु 8,000

47. (d)

	A	:	B
Capital →	20, 000	:	4, 000
	5	:	1
	A's Salery =		रु 12,00

Remaining profit (शेष लाभ)

= (1800 - 1200) = रु 600

6 units = रु 600

1 units = रु 100

share of A (A का हिस्सा)

= 100 × 5 = रु 500

share of B (B का हिस्सा)

= 100 × 5 = रु 100

∴ Total share of A (A का कुल हिस्सा) = (1200 + 500) = रु 1700

Total share of B (B का कुल हिस्सा) = रु 100

48. (a) Let the total share (माना कुल हिस्सा) = 100 units

Share of C (C का हिस्सा) = $\frac{100}{4}$ = 25 units

Remaining share = (100 - 25) = 75 units

∴ Share of A = $\frac{75}{3+2}$ × 3 = 45 units

Share of B = $\frac{75}{3+2}$ × 2 = 30 units

A : B C

New pfofit sharing Ratio = 45 : 30 : 25

Required Ratio (अभिष्ट अनुपात) = 9 : 6 : 5

49. (b) Let the total share (माना कुल हिस्सा) = 200 units

∴ Share of C (C का हिस्सा)

= 200 × $\frac{1}{4}$ = 50 units

Remaining share (शेष भाग)

= (200 - 50) = 150 units

∴ share of A = $\frac{200}{3+2}$ × 3 = 120 units

share of B = $\frac{200}{3+2}$ × 2 = 80 units

According to the question, C recives equal amounts from A and B (A तथा B से C समान राशि लेता है)

∴ A's remaining share = (120 - 25)

= 95

B's remaining share = (80 - 25)

= 55

	A	:	B	:	C
New Ratio →	95	:	55	:	50
	19	:	11	:	10

50. (d)

	A	:	B	:	C
Ratio of profit →	2	:	3	:	7

Average gain = $\frac{2+3+7}{3}$ = 4 units

Accoridng to the question,

4 units = रु 8000

1 units = रु 2000

3 units = रु 3 × 2000 = रु 6000

share of B = रु 6000

∴

51. (a)

	A	:	B	:	C
profit →	$\frac{1}{4}$	:	$\frac{1}{6}$	:	$\frac{7}{12}$

Note: t avoid fraction in calculation multiply all the ratios by 9 (भिन्न को हटाने के लिए सभी अनुपात को 9 से गुणा कीजिए) After that new Ratio of profits.

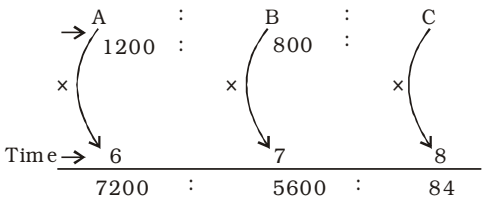
	A	:	B	:	C
profit →	27	:	18	:	63

New profit of A = 27 + $\frac{63}{5+4}$ × 4 = 55

New profit of B = 18 + $\frac{63}{4+4}$ × 5 = 53

∴ New profit sharing ratio of A and B (A तथा B के लाभ का नया अनुपात) = **55 : 53**

52. (a)



According to the question,

(9 + 7 + 6) units = रु 396

22 units = रु 396

1 unit = $\frac{396}{22}$ = रु 18

∴ share of A = 18 × 9 = रु 162

53. (b) Total capital of A invested in 1 year (A द्वारा एक साल में निवेशित कुल राशि)

= 48,000 × 3 + 40,000 × 9

= 1,44,000 + 3,60,000 = रु 5, 04,000

Total capital of B invested in 1 year (B द्वारा

एक साल में निवेशित कुल राशि)

= 60,000 × 6 + 6,60,000 × 6

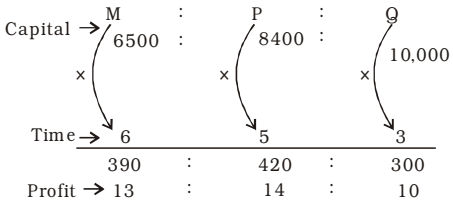
= रु 756000

	A	:	B
Capital →	504000	:	75600
	2	:	3
	↓ ×6000		↓ ×6000
	12,000		18,000

Total profit = (12 + 3) × 6000

= रु 30,000

54. (a)



M's extrea share on working partner (काम करने वाले पार्टनर पर M का अतिरिक्त हिस्सा)

$= 7400 \times \frac{5}{100}$ = रु 370

Remaining profit (शेष लाभ) = रु 7400 - रु 370 = रु 7030

According to the question,

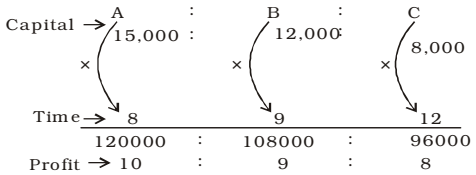
(13 + 14 + 10) units = रु 7030

37 units = रु 7030

1 units = रु $\frac{7030}{37}$

Profit of Q = 10 units = रु $\frac{7030}{37}$ × 10 = रु 1900

55. (a)



According to the question

(10 + 9 + 8) units = रु 10,800

27 units = रु 10,800

1 units = रु 400

Difference between A's share and C's (A तथा C के हिस्सो का अंतर)

share = (10 - 8) × 400 = रु 800

56. (b)

	A	:	B	:	C
profit →	50000	:	75000	:	125000
(year) →	2	:	$\frac{3}{2}$	:	1
Time					
Profit →	100	:	$\frac{75\times3}{\frac{2}{9}}$	:	125
	8	:		:	10

Required Ratio profit (अभीष्ट अनुपात) = 8 : 9 : 10

57. (b)

	A	:	B	:	C
profit →	45000	:	80000	:	120000
(year) →	2	:	$\frac{3}{2}$	:	1
Time					
Profit →	90	:	120	:	120
	3	:	4	:	4

Required Ratio profit (अभीष्ट अनुपात) = 3 : 4 : 4

58. (c)

	A	:	B	:	C
profit →	48000	:	48000	:	48000
(year) →	6	:	10	:	12
Time					
Profit →	6	:	10	:	12
	3	:	5	:	6

Note : The capital of all the partners are equal so the profit would be divided in the ratio of their time.

According to the time, (जब भी पंजी समान होती है तो लाभ समय के अनुपात में बटाता है)

(3 + 5 + 6) units = रु 5250

14 units = रु 5250

1 units = रु 375

∴ Share of A = 375 × 3 = रु 1125

Share of B = 375 × 5 = रु d 1875

Share of C = 375 × 6 = रु 2250

59. (b)

	A	:	B	:	C
profit →	60000	:	80000	:	120,000
Time →	4	:	9	:	12
Profit →	240,000	:	720,000	:	1440,000
	1	:	3	:	6

According to the question,

(1 + 3 + 6) units = रु 1,60,480

10 units = रु 1,60,480

1 unit = रु 16,048

Share of A = 16,048 × 1 = रु 16,048

Share of B = 16,048 × 3 = रु 48,144

Share of C = 16,048 × 6 = रु 96,288

60. (a) Let the amount invested by A (माना A द्वारा निवेशित रशि) = रु x

Now according to the question,

	A	:	B	:	C
Capital →	x	:	(x + 15000)	:	(x + 35000)

∴ x + x + 15000 + x + 35000 = रु 125000

3x = 125000 - 50000

3x = 75000

x = रु 25000

∴ Amount invested by B

(B द्वारा निवेशित राशि) = रु 40,000

Amount invested by C

(C द्वारा निवेशित राशि) = रु 60,000

	A	:	B	:	C
Capital →	25000	:	40,000	:	60,000
Proift →	5	:	8	:	12

(5 + 8 + 12) units = रु 37450

25 units = रु 37450

1 units = रु 1498

∴ Share of A = 1498 × 5 = रु 7490

Share of B = 1498 × 8 = रु 11984

Share of C = 1498 × 12 = रु 17976

61. (b) Capital invested by A

(A द्वारा निवेशित राशि) = रु 42,000

Capital invested by B

(B द्वारा निवेशित राशि) = रु 49,000

Ratio of profits of B and A = 900 : 700 = 9 : 7

We know, $\boxed{\frac{C_1 \times T_1}{C_2 \times T_2} = \frac{P_1}{P_2}}$

$$\frac{42,000 \times 12}{49,000 \times T_2} = \frac{9}{7}$$

It means B invested his capital for 8 m months. It means he joined businese after (12 - 8 = 4) months. (अत: B ने चार महीने बाद व्यवसाय में निवेश किया)

62. (d) Let amount invested by A रु x

	A	:	B
Capital →	x	:	(x + 5000)

According to the question, Share of A in profit (A का हिस्स)

$$= \frac{(26000 - 6000)}{2} = \text{रु } 10,000$$

Share of B in profit (B का हिस्सा)

= (26000 - 10000)

= रु 16,000

By using formulaes: $\boxed{\frac{C_1 \times T_1}{C_2 \times T_2} = \frac{P_1}{P_2}}$

$$\frac{x \times 5}{(x + 5000) \times 6} = \frac{10,000}{16,000}$$

4x = 3x + 15000

x = रु 15000

Required capital of A (A का निवेश) = रु 15000

Required capital of B (B का निवेश)

= (15,000 + 5000)

= रु 20,000

63. (c) Ratio of Capital invested by A, b and C (A, B तथा C के निवेश का अनुपात) = 15 : 10 : 6

Total Capital invested by A in 1 year (एक साल में A का निवेश) = 15x × 4 + 30x × 8 = 300x

total capital by B in 1 year (एक साल में B का निवेश) = 10x × 6 + 5x × 6 = 90x

total capital invested by C in 1 year (एक साल में C का निवेश)

= 6x × 12 = 72x

Ratio of profits :

A	:	B	:	C
300x	:	90x	:	72x
50x	:	15x	:	12x

According to the question,

(50x + 15x + 12x) = रु 34650

77x = रु 34650

x = रु $\frac{34650}{77}$ = रु 450

Profit of A (A का हिस्सा) = रु 450 × 50 = रु 22500

Profit of B (B का हिस्सा) = रु 450 × 15 = रु 6750

Profit of C (C का हिस्सा) = रु 450 × 12 = रु 5400

64. (d) Total capital invested by A in year (एक साल में B का निवेश)

= 36000 × 12 = रु 432000

Total capital invested by B in 1 year = 45000 × 4 + (45000 - 20000) × 5 + (55000 + 25000) × 3
= 180000 + 125000 + 240000
= 545000

	A	:	B
Ratio of capital	432000	:	545000
Ratio of profit	432	:	545

Accrording to the question,
(432 + 545) units = Rs. 117240
977 units = Rs. Rs. 117240

$1 \text{ units} = \frac{117240}{977} = \text{Rs. } 120$

Difference in profit = (545 - 432) × 120 = 13560
It means B will get Rs. 13560 more than A. (अत: B को A से 13560 Rs. अधिक मिलते है)

65. (b)

	A	:	B	:	C
Capital	24000	:	32000	:	18000
	12	:	16	:	9

Let the total profit (A का अतिरिक्त हिस्सा)

$= 100x \times \frac{15}{100} = 15x$

Extra share of B (B का अतिरिक्त हिस्सा) = 100

$\times \frac{12}{100} = 12x$

Remaining profit = [100x- (15x +12x] = 73x
Note : Remaining profit is distributed in the ratio of their capitals (शेष लाभ पूंजी के अनुपात में बटेगा)
$\therefore$ Share of C

$= \frac{73x}{(12+16+9)} \times 9 = \frac{657x}{37}$

$\frac{657x}{37} = \text{Rs. } 65700$

$x = \text{Rs. } \frac{65700 \times 37}{37} = \text{Rs. } 3700$

$\therefore$ Hence required profit (अभीष्ट लाभ) = 100x
= 100 × 3700 = Rs. 3,70,000

66. (c)

	A	B	C
Ratio of cows	12	16	6
Time	4×2	4×6	9×2
Ratio of Rent	96	384	108
	8	32	9
	×36	×36	×36
	288	1152	324

Total rent (288 + 1152 + 324)
= Rs. 1764

67. (a)

	A	:	B	:	C
Capital	500	:	400	:	800
Time	12	:	10	:	6
Profit	60,00		4000		4800
	15	:	10	:	12

According to the question,
(15 + 10 + 12) units = Rs. 444
37 units = Rs. 444

$1 \text{ units} = \frac{444}{37} = \text{Rs. } 12$

Profit of A = 12 × 15 = Rs. 180
Profit of B = 10 × 12 = Rs. 120
Profit of C = 12 × 12 = Rs. 144

68. (d) B's profit share in 1 year (एक साल में B का लाभ) = 12 × 100 = Rs. 1200

$\text{Interest of A} = \frac{10{,}000 \times 5 \times 1}{100}$

= Rs. 500

$\text{Interest of B} = \frac{4000 \times 5 \times 1}{100} = \text{Rs. } 200$

Total profit of A and b (A तथा B का कुल लाभ)
= (1200 + 500 + 200) = Rs. 1900
remaining profit (शेष लाभ)
= Rs. 2100

Note: Remaining profit will be divide in the ratio of their profit, (शेष लाभ पूंजी के अनुपात में बटेगा)

	A	:	B
Capital	10,000	:	4000
	5	:	2

Share of A in remaining profit (शेष लाभ में A का हिस्सा) $= \frac{2100}{(5+2)} \times 5$

= Rs. 1500

Share of B in Remaining profit (शेष लाभ में B का हिस्सा) $= \text{m } \frac{2100}{(5+2)} \times 2$

= Rs. 600

Total profit of A (A क कुल लाभ) = 500 + 1500 = Rs. 2000
Total profit of B (B क कुल लाभ) = 1200 + 600 + 200 = Rs. 2000

69. (a) total capital invested by A in 1 year (एक साल में A ाक निवेश)

= 12 × 4000 = Rs. 48000

Total capital invested by B in 1 year (एक साल में B का निवेश)

= 6000 × 4 + 8000 × 8

= 24000 + 64000 = Rs. 88000

Total capital invested by C in 1 year (एक साल में C का निवेश)

= 8000 × 9 + 3 × 6000

= 72000 + 18000 = 90,000

	A	:	B	:	C
Capital	48000	:	88000	:	90,000
	24	:	44	:	45

According to the question,

(24 + 44 + 45) units = Rs. 16950

113 units = 16950

1 units = Rs. $\frac{16950}{113}$ = Rs. 150

Hence,

Profit of A (A का हिस्सा) = 150 × 24

= 3600

Profit of B (B का हिस्सा) = 150 × 44

= 6600

Profit of C (C का हिस्सा) = 150 × 45

= Rs. 6750

70. (d) A : B : C = $\frac{1}{4} : \frac{1}{3} : \frac{1}{6}$

Ratio of shares of A, b and C

	A	:	B	:	C
Capital	3x	:	4x	:	2x

total capital invested by A in 1 year (एक साल में a का निवेश)

= 3x × 4 + 1.5x × 8 = 24x

Total capital invested by b in 1 year (एक साल में B का निवेश)

= 4x × 6 + $\frac{4x}{3}$ × 6 = 32x

Total capital invested by C in year (एक साल में c का निवेश)

= 2x × 12 = 24x

	A	:	B	:	C
Capital	24x	:	32x	:	24x
	3x	:	4x	:	3x

According to the question,

(3x + 4x + 3x) = 14000

10x = 14000

x = 1400

Hence, Profit of A (A का हिस्सा) = 1400 × 3 = Rs. 4200

Profit of B (B का हिस्सा) = 1400 × 4 = Rs. 5600

Profit of C (C का हिस्सा) = 1400 × 3 = Rs. 4200