15 CHAPTER

PARTNERSHIP

EXERCISE

1. A starts some 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) 1 : 3 (b) 3 : 2
(c) 1 : 5 (d) None of these

2. A, B and C started a business with their investments in the ratio 1 : 2 : 4. After 6 month A invested the half amount more as before and B invested same the amount as before while C withdrew $\frac{1}{4}$th of the his investments. Find the ratio of their profits at the end of the year.
(a) 5 : 12 : 13 (b) 5 : 11 : 14
(c) 5 : 12 : 14 (d) None of these

3. A working partner gets 20% as his commission of the profit after his commission is paid. If the working partner's commission is ₹ 8000, Then what is the total profit in the business?
(a) ₹ 47,000 (b) ₹ 45,000
(c) ₹ 48,000 (d) None of these

4. Rakesh Yadav Reader publication makes a profit of 9,00,000, 20% of which is paid as taxes. If the rest is divided among the partners P' Q and R in the ratio of $1 : 1\frac{1}{2} : 2$, then the shares of P, Q and R are respectively:
(a) ₹2,40,000; ₹3,20,000; ₹1,60,000
(b) ₹3,20,000; ₹2,40,000; ₹1,60,000
(c) ₹1,60,000; ₹3,20,000; ₹2,40,000
(d) ₹1,60,000; ₹2,40,000; ₹3,20,000

5. We have to divide a sum of ₹ 13,950 among three persons A, B and C. B must get the double of A's share and C must get ₹ 50 less than the double of B's share. The share of A will be :
(a) ₹ 1950 (b) ₹ 1981.25
(c) ₹ 2000 (d) ₹ 2007.75

6. A started business with ₹ 45,000 and B joined after ward with 30,000. If the profit at the end of a year was divided in the ratio 2 : 1 respectively, then B would have joined A for business after.
(a) 1 month (b) 2 month
(c) 3 month (d) 4 month

7. X and Y are partners in a business. They invest in the ratio 5 : 6, at the end of 8 months X withdraws his capital. If they receive profits in the ratio of 5 : 9, Find how long Y's investment was used?
(a) 12 months (b) 10 months
(c) 15 months (d) 14 months

8. Four milkmen rented a pasture. M put to graze 16 cows for 3 months and N 20 cows for 4 months, O 18 cows for 6 months and P 42 cows for 2 months. If M's share of rent be Rs. 2400, the rent paid by O is.
(a) ₹ 3200 (b) ₹ 4200
(c) ₹ 4000 (d) ₹ 5400

9. A, B and C invested Rs. 47000 for a business. If A subscribes ₹ 7,000 more than B and B ₹ 5,000 more than C, then out of total profit of Rs. 4700, C receives.
(a) ₹ 1200 (b) ₹ 4500
(c) ₹ 1000 (d) None of these

10. ₹ 11250 are divided among A, B and C so that A may receive one half as much as B and C together receive and B receives one-fourth of what A and C together receive. The share of A is more than that of B by.
(a) ₹ 2500 (b) ₹ 1500
(c) ₹ 1800 (d) ₹ 650

11. X starts a business with ₹ 25,000. After 4 months Y joins him with ₹ 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

12. A starts a business with 21,000/- and later B joins him with 36,000/- After how many months did B join if the profit is distributed in equal ratio?
(a) 5 (b) 7
(c) 6 (d) 9

13. A and B started a business investing amount of ₹1,85,000 and ₹ 2,25,000 respectively. if B's share in the profit earned by them is ₹ 9,000 then what is the total profit earned by them together?
(a) ₹ 17,400 (b) ₹ 16,400
(c) ₹ 16,800 (d) ₹ 17,800

14. A and B stared a boutique investing amounts of ₹ 35,000 and ₹ 56,000 respectively. If A's share in the profit earned by them need is ₹ 45,000, then what is the total profit earned?
(a) ₹ 81,000 (b) ₹ 1,27,000
(c) ₹ 72,000 (d) ₹ 1,17,000

15. A invested an amount of ₹ 25,000 and started a business. B joined him after one year with an amount of ₹ 30,000. After two years from starting the business, they earned the profit of ₹ 46,000. What will be B's share in the profit?
(a) ₹ 14,000 (b) ₹ 12,000
(c) ₹ 17,250 (d) ₹ 20,000

StudyLab

16. Mr. A opened a workshop investing 40,000. He invested additional amount of 10,000 every year. After two years his Student B joined him with an amount of 85,000. Thereafter B did not invest any additional amount. On completion of four year form the opening of workshop they earned an profit of 1,95,000. What will be A's share in the earning.
(a) 85,000 (b) 1,10,000
(c) 1,35,000 (d) 95,000

17. X and Y enter into a partnership with their capitals in the ratio 7 : 9. At the end of 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

18. X and Y enter into a partnership with capitals in the ratio 5 : 6 and at the end of 8 months, X withdraws. If they receive profit in the ratio of 5 : 9. Find how long Y's capital was used.
(a) 8 months (b) 9 months
(c) 11 months (d) 12 months

19. Two partners invest ₹ 1,25,000 and ₹ 85,000 respectively in a business and agree that 60% of the profit should be divided equally between them and the remaining profit is to be divided into ratio of their capitals. If one partner gets ₹ 300 more than the other.Find the total profit made in the business.
(a) ₹ 3739.50 (b) ₹ 3937.50
(c) ₹ 3749.50 (d) ₹ 3947.50

20. Two brother invested ₹ 50,000 and ₹ 70,000 respectively in a business and agreed that 70% of the profits should be divided equally between them and the remaining profit in the ratio of investment. If one Brothersgets ₹ 90 more than the other.Find the total profit made in the business.
(a) ₹ 1200 (b) ₹ 1400
(c) ₹ 1600 (d) ₹ 1800

21. The investments made by X and Y are in the ratio 3 : 2. If 5% of total profit is donated and X gets ₹ 8,550 as his share of profit then what is the amount of total profit.
(a) ₹ 14000 (b) ₹ 15,000
(c) ₹ 11,050 (d) ₹ 12,020

22. A, B and C enter into a partnership with capitals in the ratio 5 : 6 : 8. At the end of the business term, they received the profit in the ratio 5 : 3 : 12. Find the ratio of time for which they contributed their capitals?
(a) 2 : 1 : 3 (b) 1 : 2 : 3
(c) 2 : 3 : 1 (d) 3 : 2 : 1

23. X and Y entered into a partnership, investing ₹ 16,000 and ₹ 12,000 respectively. After 3 months X withdrew ₹ 5000, while Y invested 5000 more. After 3 months more Z joins the business with a capital of ₹ 21,000. After a year they obtained a profit of ₹ 26,400. By what amount does the share of Y exceed the share of Z.
(a) ₹ 3600 (b) ₹ 3800
(c) ₹ 4600 (d) ₹ 4800

24. X, Y and Z are partner in a business. If X's capital is twice of Y's capital and Y's capital is three times to that of Z's capital then find the ratio of their investments.
(a) 6 : 3 : 1 (b) 3 : 8 : 1
(c) 4 : 9 : 3 (d) 3 : 1 : 5

25. X and Z invest capital in the ratio of 2 : 1 while X and Y invest capital in the ratio of 3 : 2. If their annual profit is ₹ 1,57,300 then what is Y share?
(a) ₹ 48,400 (b) ₹ 58,809
(c) ₹ 48,810 (d) ₹ 47,782

26. X, Y and Z enter into partnership. X invests $\frac{1}{4}$ part of total capital for one-fourth of the time. Y contributes one fifth of the capital for half of the time. Z contributes the remaining capital for the whole time. How should they divided a profit of ₹ 1140?
(a) ₹ 100, ₹ 160, ₹ 880
(b) ₹ 110, ₹ 140, ₹ 860
(c) ₹ 120, ₹ 150, ₹ 840
(d) ₹ 140, ₹ 170, ₹ 830

27. In a partnership X invests $\frac{1}{6}$ th of the capital for $\frac{1}{6}$ th of the time, Y invests $\frac{1}{3}$ rd capital for $\frac{1}{3}$ rd time and Z invests the remaining capital for the whole time. If at the end of the year the profit earned is ₹ 23,000 then what will be Y share?
(a) ₹ 5500 (b) ₹ 5000
(c) ₹ 6000 (d) ₹ 4000

28. A and B are two partners in a firm sharing the profit in the ratio 4 : 5. If the firm earns a profit of ₹14,130, then profit to be received by B
(a) ₹6,280 (b) ₹7,850
(c) ₹1,570 (d) ₹3,140

29. X and Y take a grass ground on lease for ₹300 for grazing their animals. If X grazes 10 animals for 5 weeks and Y 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

30. A and B started a business investing amounts in the ratio of 2 : 3. If A has invested an additional amount of ₹10,000, their ratio of investment would have been 3 : 2, The amount invested by A was :
(a) ₹8,000 (b) ₹12,000
(c) ₹18,000 (d) ₹20,000

31. The ratio of investments of two partners *X* and *Y* is 11 : 12 and the ratio of their profit is 2 : 3. If X invested the money for 8 months, then the time for which *Y* invested the money is:
(a) 8 months (b) 9 months
(c) 10 months (d) 11 months

32. A and B enter into partnership. At the end of 9 months B withdraws but A's capitals is used for one month more . If they receive profit in the ratio of 5 : 6, then the ratio of their capital is :
(a) 3 : 4 (b) 4 : 3
(c) 5 : 6 (d) 6 : 5

StudyLab

33. A,B and C hired a car for ₹4,160. A used it for 7 hours. B for 8 hours and C used it for 11 hours. The rent shared by A will be:
(a) ₹960 (b) ₹1120
(c) ₹1,260 (d) ₹1,760

34. A , B and C are three partners in a business. The profit share of A is $\frac{3}{16}$ of the total profit and B's share is $\frac{1}{4}$ of the total profit. If C receives ₹243, then the amount received by B will be:
(a) ₹90 (b) ₹96
(c) ₹108 (d) ₹120

35. A is a Active partner and B is a Inactive partner in busines. A puts in ₹5,000 and B puts in ₹ 6,000. A received 15% of the profit for managing the business and the rest is divided in proportion to their capitals. The amount received by A out of the profit of ₹880 in all is :
(a) ₹132 (b) ₹340
(c) ₹472 (d) ₹492

36. A starts business with a capital of ₹14,000. five monts later B joins and further two months later C joins them. If the profit sharing ratio in the end of year is 4 : 3 : 2, then the money invested by C was:
(a) ₹18,000 (b) ₹16,800
(c) ₹18,600 (d) ₹10,800

37. A, B and C become partners in a business. A contributes $\frac{1}{3}^{rd}$ of the capital for $\frac{1}{4}^{th}$ of the time. B contributes $\frac{1}{5}th$ of the capital for $\frac{1}{6}th$ of the time and C the rest of the capital for the whole time. If the profit is ₹1,820, then the A's share in profit is:
(a) ₹130 (b) ₹260
(c) ₹292 (d) ₹304

38. In a business A and B gained some amount in a certain ratio. B and C received the profit in the ratio as that of A and B. If A received ₹6,400 and C received ₹ 10,000. Find the share of B
(a) ₹2,000 (b) ₹4,000
(c) ₹8,000 (d) ₹10,000

39. A and B share profits and losses in a firm in the ratio of 3 : 2. and C entered in this firm as a new partner; his profit sharing ratio is $\frac{1}{4}$. If C has taken his share of profit from A and B in equal ratio, then the new profit shareing ratio will be :
(a) 19 : 11 : 1 (b) 19 : 11 : 10
(c) 10 : 11 : 9 (d) 10 : 11 : 19

40. A, B and C share the profit in the ratio of 2 : 3 : 7. If the average gain is ₹8,000, then B's share is:
(a) ₹2,000 (b) ₹1,000
(c) ₹1,500 (d) ₹6000

41. A, B and C share profit in the ratio of $\frac{1}{4}:\frac{1}{6}:\frac{7}{12}$. If C retires, they share the profit of C in the ratio of 4 : 5 repectively. The new profit sharing ratio of A and B will be:
(a) 55 : 53 (b) 53 : 55
(c) 5 : 3 (d) 3 : 5

42. A and B enter into partnership investing ₹ 48,000 and ₹ 60,000 respectively. After 3 months, A withdraws ₹ 8,000 while B invests ₹ 6,000 after 6 months of starting of business. Out of the total amount of profit, if A gets ₹12,000 as his share at the end of the year total proift is :
(a) ₹24,000 (b) ₹30,000
(c) ₹36,000 (d) ₹37,000

43. M, P and Q together started a business. M invested ₹ 6,500 for 6 months, P invested ₹ 8,400 for 5 months and Q invested ₹ 10,000 for 3 months. M is working member for which he gets 5% of total profit extra. If the total gain is ₹ 7,400, then Q's share is:
(a) ₹1900
(b) ₹2,100
(c) ₹3,200
(d) Data are incomplete

44. A ,B and C jointly start a businees A puts in ₹15,000 for 8 months B puts in ₹12,000 for 9 months and C puts in ₹8,000, for the whole year. In the end of the year there is a profit of ₹10,800. The difference between A's share and C share in the profit will be:
(a) ₹800 (b) ₹600
(c) ₹1200 (d) ₹1,800

45. A started a business by investing ₹50,000. After 6 months B joined her by investing ₹75,000 . After its 6 months C joined with ₹1,25,000. What is the ratio of profit shared after 2 years among A, B and C ?
(a) 4 : 5 : 6 (b) 8 : 9 : 10
(c) 8 : 9 : 12 (d) 4 : 5 : 8

46. A starts a business with ₹45,000. After 6 months B enters in his business with ₹80,000. After one year C invests ₹1,20,000. In what ratio the profit will be divided among A, B and C after two years?
(a) 9 : 16 : 24 (b) 3 : 4 : 4
(c) 3 : 4 : 8 (d) 3 : 3 : 8

47. Three partner A, B and C started a business by investing Rs. 48000 each.after 6 months, A left the business after 10 months B left the business and after 12 months C left the business. If total earned profit is Rs. 5250, then find the share of A, B and C?
(a) ₹1125,₹1825,₹2250
(b) ₹ 1125,₹1800,₹2200
(c) ₹1125,₹1875,₹2250
(d) ₹1175,₹1256,₹2350

48. Three partners started a business by investing Rs.60,000, Rs.80,000 and Rs. 1,20,000 respectively. First partner left the business after 4 months, secondafter 9 months and third rem ained in the business for the whole year. At the end of year the total profit earned is Rs. 1,60,480, then find theirshares of profit.
(a) ₹ 16840, ₹44188, ₹ 92686
(b) ₹ 16048, ₹48144, ₹ 96288
(c) ₹ 16042, ₹14842, ₹ 9862
(d) ₹ 15000, ₹13423, ₹ 7562

StudyLab

49. A,B and C have invested a sum of Rs. 125000 in a business. B invested R. 15000 more than A and C invested RS. 20,000 more than B. If the total earned profit is Rs. 37450 at the end of year, then find their share of profit.
(a) ₹7490, ₹11984, ₹17976
(b) ₹8480, ₹7550, ₹8560
(c) ₹7940, ₹7054, ₹17500
(d) ₹5100, ₹6943, ₹7140

50. A started a business by investing Rs. 42000. After few months B joined by investing Rs. 49,000. If at the end of year A got Rs. 9000 and B got Rs.7000 as a share of their profit. Then after how many months B joined the business.
(a) 1 month (b) 4 months
(c) 2 months (d) 3 months

51. A started a business by investing some money and B invested Rs. 5000 more than that of A. A remained in business for 5 months and B remained in business 1 month more than A. out of the total profit of Rs. 26000, B got Rs. 6000 more than A. Find the capitals invested A and B.
(a) ₹29,000, ₹18,000
(b) ₹25,000, ₹30,000
(c) ₹15,000, ₹10,000
(d) ₹15,000, ₹20,000

52. A, B and C invested money in the ratio of $\frac{1}{2}:\frac{1}{3}:\frac{1}{5}$ in a business. After 4 months A doubled his investement and after 6 months B halves his investement. If the total profit at the end of year be Rs. 34650 then find the share of each in profit.
(a) ₹20,000,₹25,000,₹18,000
(b) ₹15,500,₹27,200,₹20,450
(c) ₹22,500,₹6750,₹5400
(d) ₹10350,21,540,₹12,050

53. A and B started a business by investing Rs. 36000 and Rs. 45000 respectively. After 4 months B withdraws $\frac{4}{9}$ of his investment. its 5 months After she again invested $\frac{11}{9}$ of its original investment. If the total earned profit at the end of the year, is Rs. 117240, then who will get more money as a share of profit and how much?
(a) A, ₹15,500 (b) B, ₹12,450
(c) A, ₹14,245 (d) B, ₹13,560

54. A, B and C started a business by investing Rs. 24,000, Rs. 32000 and Rs.18000 respect ively. A and B are active partners and get 15% and 12% of total profit and remaining profit is to be distributed among them in the ratio of their investment. If C got total Rs.65700 as a profit,what was the total amount of profit ?
(a) ₹4,70,000 (b) ₹ 3,70,000
(c) ₹3,45,000 (d) ₹1,57,000

55. A, B and C hired a pasture. A grazed 12 cows 2 hours every day for 4 months, B grazed 16 cows, 4 hours every day for 6 months and C grazed 6 cows 9 hours everyday for 2 months. If B has paid Rs. 1152 as a share of fare. Find the amount of total Rent.
(a) ₹1413 (b) ₹1214
(c) ₹1764 (d) ₹1102

56. A started a business with the capital of Rs. 500. After 2 months B joined A with Rs. 400. 6 months after the business started C joined with Rs. 800. If the total profit earned at the end of the year is Rs. 444 find the share of their profit.
(a) ₹180,₹120,₹144
(b) ₹150,₹130,₹123
(c) ₹160,₹141,₹125
(d) ₹141,₹110,₹140

57. A and B started a business in partnership by investing Rs.10,000 and Rs. 4000 respectively. condition of partnership is that B got Rs.100 per month for management of the business. After paying 5% interest on the capital, annual profit has distributed in the ratio of their investment. Find the share of their profit, if the annual profit is Rs. 4000.
(a) ₹ 3000 each
(b) ₹ 2500 each
(c) ₹ 1500 each
(d) ₹ 2000 each

58. A, B and C are partners in a business partnership. A invested Rs. 4000 for whole year. B invested Rs. 6000 initialy but increased this investment upto Rs. 8000 at the end of 4 months, while C invested Rs, 8000 intially, but withdraw Rs. 2000 at the end of 9 months, At the end of year total earned profit is Rs. 16950, find their share of profit.
(a) ₹3600,₹6600,₹6750
(b) ₹2000,₹3050,₹5400
(c) ₹2450,₹2460,₹1456
(d) None of these

59. Three partners A, B and C invested in the ratio of $\frac{5}{4}:\frac{4}{5}:\frac{6}{5}$ in a business. After 3 months A increased his capital by 50% If the total profit of Rs. 35,700 earned at the end of year, find what was the A's share of profit?
(a) ₹12,000 (b)₹ 16,500
(c) ₹ 13,000 (d) ₹ 15,600

60. Out of total capital required to start a business A invested 30%, B invested $\frac{2}{5}$th and C invested the remaining capital. At the end of one year sum of Rs. 4000 is earned as a profit which is 20% of the capitial given by B, then find how much C invested in the business?
(a) ₹25000 (b) ₹10000
(c) ₹15000 (d) ₹12450

61. A and B started a business in partnership by investing in the ratio of 7 : 9. After 3 months A withdraw $\frac{2}{3}$ of its investment and after 4 months from the begining B withdraw $33\frac{1}{3}\%$ of its investment. If a total earned profit is Rs. 10201 at the end of 9 months, find the share of each in profit.
(a) ₹3535, ₹6666
(b) ₹3055, ₹5555
(c) ₹4503, ₹1345
(d) ₹3545, ₹3333

StudyLab

62. Three partners invested Rs. 42000, Rs. 48000 and Rs. 32000 respectively. part- nership condition is that, each will the get interest on his capital at the rate of 7% per annum and the remaining profit will be divided in the ratio of their capitals. If at the end of the year the total profit is Rs. 32940, then find the share of A in profit.

(a) ₹12960

(b) ₹11340

(c) ₹8640

(d) None of these

63. Rs. 490 is divided among A, B and C such that A's share is half that of B's and thrice that of C's. What is C's share?

(a) Rs. 49 (b) Rs. 147

(c) Rs. 294 (d) Rs. 245

64. A, B and C enter into a partnership, investing Rs. 6000. A invests Rs. 1000 and B and C in invests in the ratio of 2 : 3. Find the profit of C, when the annual profit is Rs. 2400

(a) Rs. 600

(b) Rs. 1200

(c) Rs. 1800

(d) Rs. 1950

(SSC CGL Pre Exam 2016)

65. 3 brothers divided 1620 among them in such a way that the share of second is equal to $\frac{5}{13}$ of share of other two, combined. What is the share of the second one?

(a) ₹ 1170

(b) ₹ 450

(c) ₹ 540

(d) ₹ 500

(SSC CGL Pre Exam 2016)

66. A and B invest Rs. 3000 and Rs. 2400 respectively in a business. If after one year there is a loss Rs. 720, how much loss will B bear? (loss or Profit is in proportion to their investments)

(a) ₹ 72

(b) ₹ 320

(c) ₹ 400

(d) ₹ 360

(SSC CGL Pre Exam 2016)

67. A, B and C together start a business. Three times the investment of A equal four times the investment of B and the Capital of B is twice that of C. The ratio of share of each in the profit.

(a) 8 : 3 : 6 (b) 3 : 8 : 6

(c) 3 : 6 : 8 (d) 8 : 6 : 3

(SSC CGL Mains Exam 2016)

ANSWER KEY

1. (d)	9. (c)	17. (c)	25. (a)	33. (b)	41. (a)	49. (a)	57. (d)	65. (b)
2. (c)	10. (b)	18. (d)	26. (a)	34. (c)	42. (b)	50. (b)	58. (a)	66. (b)
3. (c)	11. (c)	19. (b)	27. (d)	35. (c)	43. (a)	51. (d)	59. (b)	67. (d)
4. (d)	12. (a)	20. (d)	28. (b)	36. (b)	44. (a)	52. (c)	60. (c)	
5. (c)	13. (b)	21. (b)	29. (b)	37. (b)	45. (b)	53. (d)	61. (a)	
6. (c)	14. (d)	22. (a)	30. (a)	38. (c)	46. (b)	54. (b)	62. (b)	
7. (a)	15. (c)	23. (a)	31. (d)	39. (b)	47. (c)	55. (c)	63. (a)	
8. (d)	16. (b)	24. (a)	32. (a)	40. (d)	48. (b)	56. (a)	64. (b)	

StudyLab

EXPLANATION

1. (d)

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

Required Ratio of profits = 20 : 21

2. (c) **Note :** We can assume values as per our need but the ratio of values should not be changed.

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

Total capital invested by A
$= (2x \times 6 + 3x \times 6) = 30x$
Total capital invested by B
$= (4x \times 6 + 8x \times 6) = 72x$
Total capital invested by C
$= (6 \times 8x + 6x \times 6)$
$= (48x + 36x) = 84x$
New ratio of capitals:

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

Note : Profit would be divided in the ratio of their capitals.
Required ratio of their profit
= 5 : 12 : 14

3. (c) Let the total profit = ₹ k.
According to the question,
Remaining profit after paying 20% working
Partner's commission
= (k – 8000)

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

$k = 48000$
$\therefore$ Total profit = ₹ **48000**

4. (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.
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 = $2x = 2 \times 80{,}000$
= ₹ 1,60,000
Profit of Q = $3x = 3 \times 80{,}000$
= ₹ 2,40,000
Profit of R = $4x = 4 \times 80{,}000$
= ₹ 3, 20,000

5. (c) Let the share of A = ₹ 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 = ₹ **2000**

6. (c) Capital of A (i) ₹ 45,000
Capital of B (ii) ₹ 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 (12 – 9) = **3 months**

7. (a) Let Y's investment is used for T months → Now by using formula.

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

T = 12 months

8. (d)

	M	N	O	P
No. of Cows →	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 units = ₹ 2400

$$1 \text{ unit} = ₹ \frac{2400}{12}$$

$$27 \text{ units} = ₹ \frac{2400}{12} \times 27 = ₹ \textbf{5400}$$

9. (c) Let C subscribes the business = ₹ x

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

Note : Profit would be divide in the ratio of their capitals.
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

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

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

10. (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+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 = ₹ 11250
15 units = ₹ 11250
1 unit = ₹ 750
Difference in shares of A and B
= (5 – 3) × 750
= ₹ 1500

StudyLab

11. (c)

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

∴ Hence Required ratio = **15 : 8**

12. (a) Capital of A = ₹ 21,000
Capital of B = ₹ 36,000
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
∴ so B joined business after (12 – 7 = 5) months.

13. (b)

	A	:	B
Capital →	1,85,0000	:	2,25,000
Profit →	37	:	45
	× 200 ↓		× 200 ↓
	7400		9000

Total profit = (7400 + 9000)
= ₹ **16400**

14. (d)

	A	:	B
Capital →	35,000	:	56,000
Profit →	5	:	8
	× 9000 ↓		× 9000 ↓
	45000		72,000

Total profit = (45000 + 72,000)
= ₹ **1, 17, 000**

15. (c)

	A	:	B
Capital →	25,000	:	30,000
	5 ×	:	6 ×
Time →	2	:	1
Profit →	10	:	6
	5	:	3

According to the question,
(5 +3) units = ₹ 46,000
8 units = ₹ 46,000

$$1 \text{ unit} = ₹ \frac{46,000}{8}$$

$$3 \text{ units} = ₹ \frac{46,000}{8} \times 3 = ₹ \mathbf{17,250}$$

Hence share of B = ₹ **17,250**

16. (b) Total investment of A in 4 years
= 40,000 + 50, 000 + 60, 000 + 70,000
= ₹ 22,00,00
Total investment of B in 2 years
= 85,000 × 2 = 170,000

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

According to the question,
(22 + 17) units = ₹ 1,95,000
39 units = ₹ 1,95,000

$$1 \text{ unit} = ₹ \frac{1,95,000}{39}$$

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

= ₹ **1,10,000**

17. (c) Let the Y's capital was used for T months
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.

18. (d) Let the capitals of Y was used for T months
According to the question.

$$\frac{5 \times 8}{6 \times T} = \frac{5}{9} \Rightarrow T = \mathbf{12 \text{ months}}$$

Hence capital of Y was used for = 12 months.

19. (b)

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

According to the question,
Note : 60 % of profit should be divided equaly between them
8 units = ₹ 300

$$1 \text{ unit} = ₹ \frac{300}{8}$$

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

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

$$100\% \text{ profit} = ₹ \frac{300 \times 100}{8 \times 40} \times 42$$

= ₹ **3937.50**

20. (d)

	1st Brother	:	2nd Brother
Capital →	50,000	:	70,000
	5	:	7
		+2	

2 unit = 90
1 unit = 45
so 5 + 7 = 12
so 12 unit = 45 × 12
30% = 45 × 12

$$100\% = \frac{45 \times 12}{30} \times 100 = ₹1800$$

21. (b) Let the total profit = 100 units
Remaining profit after donation

$$= 100 - \frac{100 \times 5}{100} = 95 \text{ units}$$

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

= 57 units
According to the question,
57 units = ₹ 8550

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

$$100 \text{ units} = \frac{8550}{57} \times 100$$

= ₹**15000**

Alternate :

X	:	Y
3	:	2

3 units = ₹ 8550

$$1 \text{ unit} = ₹ \frac{8550}{3} = ₹ 2850$$

5 units = 2850 × 5 = ₹ **14250**
Note: 5 % of total profit is donated
∴ 95 % of total profit = ₹ 14250

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

100 % of total profit

$$= ₹ \frac{14250}{95} \times 100 = ₹ \mathbf{15,000}$$

22. (a)

	A	:	B	:	C
Capital →	5 ×	:	6 ×	:	8 ×
Time →	1	:	$\frac{1}{2}$	:	$\frac{3}{2}$
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.
∴ Required ratio of Time

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

= 2 : 1 : 3

StudyLab

Alternate

Profit = Time × Capital invested

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

Required ratio of time

$$= \frac{5}{5} : \frac{3}{6} : \frac{12}{8}$$

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

$$= 2 : 1 : 3$$

23. (a) Total capital invested by X in a year

= 16,000 × 3 + 11000 × 9

= ₹ 147,000

Total capital invested by Y in a year

= 12000 × 3 + 17000 × 9

= ₹189,000

Money invested by Z = 21,000 × 6 = ₹ 126,000

	X	:	Y	:	Z
Capital →	147	:	189	:	126
	7	:	9	:	6

According to the question,

(7 + 9 + 6) units = ₹ 26,400

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

= ₹ 1,200

Reqiured difference = (9 – 6) × 1200 = ₹ **3600**

24. (a) According to the question,

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

∴ Required ratio of capital = **6 : 3 : 1**

25. (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	:	Y	:	Z
6	:	4	:	3

According to the question,

(6 + 4 + 3) units = ₹ 1,57, 300

13 units = ₹ 1,57,300

1 unit = ₹ 1,21,00

4 units = ₹ 1,2100 × 4

= ₹ **48,400**

∴ Share of Y = ₹ **48,400**

26. (a) Let the total time = 8 years

Let the total capital = 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 = ₹ 1140

57 units = ₹ 1140

$$1 \text{ unit} = ₹ \frac{1140}{57} = \textbf{₹ 20}$$

Profit of X = 20 × 5 = ₹ 100

Profit of Y = 20 × 8 = ₹ 160

Profit of Z = 20 × 44 = ₹ 880

27. (d) Let the Capital = 18 units

Let the time = 6 years

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

According to the question,

(1 + 4 + 18) units = ₹ 23000

23 units = ₹ 23000

1 unit = ₹ 1000

4 units = ₹ 1000 × 4 = ₹ 4000

Share of Y is ₹ 4,000

28. (b)

A	:	B
4	:	5

According to the questionm,

(4+5) units = ₹14,130

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

5 units = 5 × 1570 = ₹7850

∴ Hence share of B = **₹7850**

29. (b) Total Rent = ₹300

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

30. (a) Initial Ratio of investments by A and B = 2 : 3

Let their respective investments are $2x$ and $3x$

According to question.

If A added ₹10,000 to his investment

Then New Ratio = 3 : 2

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

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

$$5x = 20000$$

$$x = ₹4000$$

⇒ original investment by A

= 2 × 4000 = ₹8000

Alternative

A	:	B
2×2	:	3 ×2
3×3	:	2 ×3

Note: we know A has an addlitional amount. So amount of B would be same

After that new Ratio

A		B
4	:	6
+5		
9	:	6

According to the question

5 units = ₹ 10,000

1 unit = ₹ 2,000

Initial capital of A

= 2000 × 4 = ₹ 8000

31. (d) Let capital of X be ₹ $11x$ and Y's capital be ₹ $12x$

and let time for which Y invested capital is T_2 months

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

32. (a) Let A's Capital = ₹x

Let B's Capital = ₹y

Now Acc. to question

	A	B
Capital →	x	y
Time (in month) →	(9 +1) = 10	9
Ratio of profit →	5	6

we know

$$\frac{10 \times x}{9 \times y} = \frac{5}{6} \Rightarrow \frac{x}{y} = \frac{3}{4}$$

Hence the required ratio of capital of A and B is = 3 : 4

StudyLab

33. (b) Total cost of hiring a car = ₹4,160

According to question,

	A	B	C
Time. of using car in hours	7	8	11

Here the ratio of time will be the ratio of rent each person has to pay

⇒ ratio of rents 7: 8 : 11 to be paid

$$\text{Rent shared by A} = \frac{4160\times7}{7+8+11}$$

$$= ₹\ 1120$$

34. (c) Let total profit = 16 units

According to question

Profit share of A

$$= \frac{3}{16}\times16 \text{ units}$$

$$= 3 \text{ units}$$

$$\text{profit share of B} = \frac{1}{4}\times16 = 4 \text{ units}$$

then profit share of C = [16 –(4+3)]

= 9 units

But profit of C = ₹ 243 [given]

9 units = ₹ 243

1 units = ₹ 27

profit share of B

= 4 units

= 27 × 4 = ₹ 108

35. (c) Total profit = ₹ 880

Since A gets 15% of total profit for management

∴ Remaining profit

$$= 880 - \frac{880\times15}{100} = ₹\ 748$$

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

The remaining profit is being divided in the ratio of their capital. A's share of proift

$$= \frac{748}{(5+6)}\times5 = ₹\ 340$$

Total profit Received by A = 340 +132 = ₹ 472

36. (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	$4x$:	$3x$:	$2x$

$4x = 1,68,000$

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

⇒ Profit share of C = $2x$

= (2×42,000)

= ₹ 84000

⇒ Capital invested by C

$$= \frac{84000}{5} = ₹\ 16,800$$

37. (b) Let total capital of A,B and C = 15 units

Let total time for investment = 12 units

Now, According to question .

	A		B		C
Capitals	$\frac{1}{3}\times15$units		$\frac{1}{5}\times15$units		15 – 8 = 7
Time Ratio of time	5 → 3	×	3 → 2	×	7 → 12
	$\frac{1}{4}\times12$ units	×	$\frac{1}{6}\times12$ units	×	12 units
	15		6		84
Ratio of profits	5	:	2	:	28

Total profit = 5 + 2 +28 = 35 units

also, total profit = ₹1820 (Given)

35 units = ₹1820

$$1 \text{ unit} = \frac{1820}{35} = ₹\ 52$$

Hence A's share in profit = 5 units = 52× 5 = ₹ 260

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

∴ Ratio of profit of B and C = a : b

A	:	B		B	:	C
$a_{\times a}$	:	$b_{\times a}$		$a_{\times b}$	:	$b_{\times b}$

Note: Value of B would be same in both cases

A	:	B	:	C
a^2	:	ab	:	b^2

According to the question,

$a^2 = 6400$

$a = 80$

Simlarly $b^2 = 10,000$

⇒ $b = 100$

Amount recived by B = ab = 80 × 100

= ₹ 8,000

39. (b) Let the total share = 200 units

∴ Share of C

$$= 200\times \frac{1}{4} = 50 \text{ units}$$

Remaining share

= (200 – 50) = 150 units

∴ Share of A $= \frac{200}{3+2}\times3 = 120$ units

Share of B $= \frac{200}{3+2}\times2 = 80$ units

According to the question,

C recives equal amounts from A and B

∴ 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

40. (d)

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

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

According to the question,

4 units = ₹ 8000

1 unit = ₹ 2000

3 units = 3 × 2000 = ₹ 6000

∴ share of B = ₹ 6000

41. (a)

	A	:	B	:	C
profit →	$\frac{1}{4}$	:	$\frac{1}{6}$	:	$\frac{7}{12}$
	$3_{\times9}$	:	$2_{\times9}$	:	$7_{\times9}$

Note: To avoid fraction in calculation multiply all the ratios by 9 After that new Ratio of profits.

	A	:	B	:	C
profit →	27	:	18	:	63

$$\text{New profit of A} = 27 + \frac{63}{5+4}\times4 = 55$$

$$\text{New profit of B} = 18 + \frac{63}{4+5}\times5 = 53$$

∴ New profit sharing ratio of A and B

= **55 : 53**

42. (b) Total capital of A invested in 1 year

= 48,000× 3 + 40,000 × 9

= 1,44,000 + 3,60,000

= ₹ 5,04,000

Total capital of B invested in 1 year

= 60,000 × 6 + 6,60,00 × 6

= ₹ 756000

	A	:	B
Capital →	504000	:	756000
Profit →	2	:	3
	× 6000		× 6000
	12,000		18,000

Total profit = (2 + 3) × 6000

= ₹ 30,000

StudyLab

43. (a)

	M		P		Q
Capital →	6500	×	8400	×	10,000
Time →	6		5		3
	390	:	420	:	300
Profit →	13	:	14	:	10

M's extra share on working partner = $7400 \times \frac{5}{100}$ = ₹ 370

Remaining Profit = ₹ 7400 – ₹ 370 = ₹ 7030

According to the question ,

(13 + 14 +10) units = ₹ 7030

37 units = ₹ 7030

1 units = ₹ $\frac{7030}{37}$

Profit of Q = 10 units

= ₹ $\frac{7030}{37} \times 10$ = ₹ 1900

44. (a)

	A		B		C
Capital →	15,000	×	12,000	×	8,000
Time →	8		9		12
	120000	:	108000	:	96000
Profit →	10	:	9	:	8

According to the question ,

(10 +9 +8) units = ₹ 10,800

27 units = ₹ 10,800

1 unit = ₹ 400

Difference between A's share and C's share = (10 – 8) × 400 = ₹ 800

45. (b)

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

∴ Required ratio of profit = **8 : 9 : 10**

46. (b)

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

Required Ratio profit = 3 : 4 : 4

47. (c)

	A	:	B	:	C
Capital →	48000	:	48000	:	48000
Time →	6	:	10	:	12
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,

(3 + 5 + 6)units= ₹ 5250

14 units = ₹ 5250

1 unit = ₹ 375

∴ Share of A = 375 × 3 = ₹ 1125

Share of B = 375 × 5 = ₹1875

Share of C = 375 × 6 = ₹ 2250

48. (b)

	A	:	B	:	C
Capital →	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 = ₹ 1,60,480

10 units = ₹ 1,60,480

1 unit = ₹ 16,048

Share of A =16,048 × 1

= ₹ 16,048

Share of B = 16,048 × 3

= ₹ 48,144

Share of C = 16,048 × 6

= ₹ 96,288

49. (a) Let the amount invested by A = ₹ x

Now according to the question,

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

∴ $x + x + 15000 + x + 35000$

= ₹125000

$3x$ = 125000 – 50000

$3x$ = 75000

x = ₹ 25000

∴ Amount invested by B

= ₹ 40,000

Amount invested by C

= ₹ 60,000

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

(5 + 8 + 12) units = ₹ 37450

25 units = ₹ 37450

1 unit = ₹ 1498

∴ Share of A = 1498 × 5 = ₹ 7490

Share of B = 1498 × 8 = ₹ 11984

Share of C = 1498 × 12 = ₹17976

50. (b) Capital invested by A = ₹ 42,000

Capital invested by B = ₹ 49,000

Ratio of profits of A and B

= 9000 : 7000 = 9 : 7

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

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

T_2 = 8 months

It means B invested his capital for 8 months. It means he joined business after (12 – 8 = 4) months.

51. (d) Let amount invested by A = ₹ x

	A	:	B
Capital →	x	:	$(x + 5000)$

According to the question,

Share of A in profit

= $\frac{(26000-6000)}{2}$ = ₹10,000

Share of B in profit

= (26000 – 10000)

= ₹ 16,000

By using formulaes:

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

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

$4x = 3x + 15000$

x = ₹ 15000

Required capital of A = ₹ 15,000

Required capital of B

= (15,000 + 5000) = ₹ 20,000

52. (c) Ratio of Capital invested by A, B and C = 15 : 10 : 6

Total Capital invested by A in 1 year

= $15x \times 4 + 30x \times 8 = 300x$

Total capital invested by B in 1 year

= $10x \times 6 + 5x \times 6 = 90x$

Total capital invested by C in 1 year

= $6x \times 12 = 72x$

Ratio of profits:

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

StudyLab

According to the question,

$(50x + 15x + 12x) = ₹\ 34650$

$77x = ₹\ 34650$

$x = ₹\ \frac{34650}{77} = ₹\ 450$

Profit of A = ₹ 450 × 50 = ₹ 22500

Profit of B = ₹ 450 × 15 = ₹ 6750

Profit of C = ₹ 450 × 12 = ₹ 5400

53. (d) Total capital invested by A in 1 year = 36000 × 12 = ₹ 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 unit = $\frac{117240}{977}$ = Rs. 120

Difference in profit

= (545 – 432) × 120

= 13560

It means B will get Rs. 13560 more than A.

54. (b)

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

Let the total profit = $100x$

Extra share of A = $100x \times \frac{15}{100} = 15x$

Extra share of B = $100x \times \frac{12}{100} = 12x$

Remaining profit

= $[100x – (15x + 12x)] = 73x$

According to the question,

Note: Remaining profit is distributed in the ratio of their capitals

∴ Share of C

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

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

x = Rs. $\frac{65700 \times 37}{657}$ = Rs. 3700

∴ Hence Required profit = $100x$

= 100 × 3700 = Rs. 3,70,000

55. (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

56. (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 units = $\frac{444}{37}$ = Rs. 12

Profit of A = 12 × 15 = Rs. 180

Profit of B = 10 × 12 = Rs. 120

Profit of C = 12 × 12 = Rs. 144

57. (d)B's profit share in 1 year =12 × 100 =Rs. 1200

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

= Rs. 500

Interest of B = $\frac{4000 \times 5 \times 1}{100}$

= Rs. 200

Total profit of A and B = (1200 + 500 + 200) = Rs.1900

Remaining profit

= (4000 – 1900) = Rs. 2100

Note: Remaining profit will be divide in the ratio of their profit.

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

Share of A in remaining profit

= $\frac{2100}{(5+2)} \times 5$ = Rs. 1500

Share of B in Remaining profit

= $\frac{2100}{(5+2)} \times 2$ = Rs. 600

Total profit of A

= 500 + 1500 = Rs. 2000

Total profit of B

= 1200 + 600 + 200 = Rs. 2000

58. (a) Total capital invested by A in 1 year

= 12 × 4000 = Rs. 48000

Total capital invested by B in 1 year

= 6000 × 4 + 8000 × 8

= 24000 + 64000 = Rs. 88000

Total capital invested by C in 1 year

= 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 = 150 × 24 = Rs. 3600

Profit of B = 150 × 44

= Rs. 6600

Profot of C =150 × 45

= Rs. 6750

59. (b)

	A	:	B	:	C
Capital	$25x$	:	$16x$	:	$24x$

Total capital of A in 1 year

= $25x \times 3 + (37.5x) \times 9$

= $75x + 337.5x = 412.5\ x$

Total capital of B in 1 year

= $16x \times 12 = 192x$

Total capial of C in 1 year

= $24 \times 12x = 288x$

	A	:	B	:	C
Capital	$412.5x$	:	$192x$	:	$288x$

According to the question,

$(412.5x + 192x + 288x) = 35700$

= $\frac{35700}{892.5}$ = Rs. 40

Hence, Share of A

= 412.5 × 40 = Rs. 16500

60. (c) Total profit = Rs. 4000

According to the question,

20% of B's capital = RS. 4000

1% of B's capital = $\frac{4000}{20}$

B's total capital = $\frac{4000}{20} \times 100$

= Rs. 20,000

Let total capital required for business = 100 units.

	A	:	B	:	C
Capital	30	:	40	:	30
	×500		×500		×500
	15,000	:	20,000	:	15,000

Hence, Required capital for C = RS. 15,000

StudyLab

61. (a)Note: In such type of question we can assume ratio as per our need to avoid fraction.

	A	:	B
Capital⟶	7×3		9×3
New Ratio, ⟶	21x	:	27x

Total capital invested by A in 9 months

$= 21x \times 3 + 7x \times 6 = 105x$

Total capital of B invested in 9 months

$= 27x \times 4 + 18x \times 5$

$= 108x + 90x = 198x$

	A	:	B
Capital	$105x$	:	$198x$

According to the question,

$(105x + 198x)$ = Rs. 10201

$303x = 10201$

x = Rs. $\frac{10201}{303}$

Hence, Share of A

$= 105 \times \frac{10201}{303}$ = Rs. 3535

Share of B = $198 \times \frac{10201}{303}$

= Rs. 6666

62. (b)Interest for A

$= \frac{42000\times 7\times 1}{100}$ = Rs. 2940

Interest for B

$= \frac{48000\times 7\times 1}{100}$ = Rs. 3360

Interest for C

$= \frac{32000\times 7\times 1}{100}$ = Rs. 2240

Total interest of

(A + B + C) = (2940 + 3360 + 2240) = Rs. 8540

Remaining profit

= RS. (32940 – 8540)

= Rs. 24400

	A	:	B	:	C
Capital	42000	:	48000	:	32000
	21	:	24	:	16

According to the question,

(21 + 24 + 16) units = Rs. 24400

61 units = Rs. 24400

1 units = RS. 400

Hence, Share of A in Remaining profit

= 400 × 21 = RS. 8400

Share of B in remaining profit

= 400 × 24 = Rs. 9600

Share of C in remaining profit

= 400 × 16 = Rs. 6400

∴ Total share of A

= 8400 + 2940 = Rs. 11340

63. (a)

A	:	B	:	C
$3x$		$6x$		x

According to question,

$\Rightarrow 10x = 490$

C's share, x = 49

64. (b) Investment of A = 1000

So, Investment of B + C

= 6000 – 1000= 5000

2 : 3

B 2000, C 3000

So,

A	:	B	:	C
1000	:	2000	:	3000
1	:	2	:	3 = 6

So, Profit of C = $\frac{3}{6}\times 2400 = 1200$

65. (b) Given share of 2nd

= $\frac{5}{13}$ of (Ist + 3rd)

or, $\frac{2nd}{I^{st}+3^{rd}} = \frac{5}{13}$

∴ Ist + 2nd + 3rd = 13 + 5 = 18

∵ 18 units = 1620

∴ 1 unit = $\frac{1620}{18}$

∴ 5 unit = $\frac{1620}{18}\times 5$

= 450

Hence share of 2nd = ₹ 450

66. (b) ∵ loss will be divided according to their investment ratio =

A	:	B
3000	:	2400
5	:	4

loss of B = $\frac{4}{(5+4)}\times 720$

= ₹ 320

67. (d) 3A = 4B

B = 2C

$\frac{A}{B} = \frac{4}{3}$

$\frac{B}{C} = \frac{2}{1}$

A	B	C
4	3	
	2	1
8	6	3

StudyLab