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## Partnership

When two or more people invest their money in a business, persons are called Partners, their relationship is Partnership and money is Capital.

- If they invest money for the same time, it is called simple partnership.
- If they invest money for different time, it is called compound partnership.

This topic is basically based on ratio and percentage. We gave basics of Ratio in Time and Work. To learn the basics of ratio and percentage click the link given below:

## Partnership Problems:

Profit is directly proportional to Time and Investments.

## Profit $\propto$ Time Profit $\propto$ Investments Profit $\propto$ (Time $\times$ Investments)

## Example 1:

Three partners A, B and C invest Rs.1500, Rs. 1200 and Rs. 1800 respectively in a company. How should they divide a profit of Rs.900?

Solution: Given, there is no time given, we can say profit is proportional to investment.
Ratio of profit $=$ ratio of investment
Profit ratio of $\mathrm{A}: \mathrm{B}: \mathrm{C}=1500: 1200: 1800=5: 4: 6$
so, total profit is $5+4+6=15$ i.e. equal to 900
profit of $A=(5 / 15) \times 900=300$
profit of $B=(4 / 15) \times 900=240$
profit of $C=(6 / 15) \times 900=360$

## Example 2:

In a company, A invested Rs. 1500 for 4 months and B invested Rs. 1200 for 6 months and C invested Rs. 3600 for 2 months. If company has a profit of Rs.680. What will be the share of $A, B$ and $C$ ?

## Solution:

Ratio of profit $A: B: C=(1500 \times 4):(1200 \times 6):(3600 \times 2)$

$$
\begin{aligned}
& =60: 72: 72 \\
& =5: 6: 6
\end{aligned}
$$

total profit is $5+6+6=17$ i.e. equal to 680.
we can say, $17=680$

$$
1=40
$$

profit of A is 5 , so $5 \times 40=200$
profit of $B$ is 6 , so $6 \times 40=240$
profit of $C$ is 6 , so $6 \times 40=240$

## Note: Read questions carefully. If we can calculate capital invested and time for which capital invested. We can easily calculate share in profit.

## Example 3:

$A$ and $B$ enter into a partnership with Rs. 50000 and Rs. 75000 respectively in a company for a year. After 7 months, C get into partnership with them with Rs. 30000 and A withdraws his contribution after 9 months. How would they share their profit of Rs. 2600 at the end of the year?

Solution: A, B and C do business for 1 year but, A contributed Rs. 50000 for 9 months, B contributed 75000 for 12 months and C invested Rs. 30000 for 5 months, not for 7 months.
So the ratio of profit $A: B: C=50 \times 9: 75 \times 12: 30 \times 5$

$$
=15: 30: 5
$$

Hence total profit is $(15+30+5)=50$ which is equal to 2600
So share of $A=(15 / 50) \times 2600=780$
share of $B=(30 / 50) \times 2600=1560$
share of $C=(5 / 50) \times 2600=260$

## Example 4:

A, B and C started a company in which A invested $(1 / 3)^{\text {rd }}$ of the capital for $(1 / 4)^{\text {th }}$ of the time, $B$ invested $(1 / 2)^{\text {nd }}$ of the capital for (1/6)th of the time and C invested the remaining capital for the whole of the time. If the profit at the end of the year is Rs.1200. How would they share it?

Solution: $A$ invested $(1 / 3)^{\text {rd }}$ of the capital and $B$ invested $(1 / 2)^{\text {nd }}$ of the capital
So, remaining capital invested by $\mathrm{C}=1-((1 / 3)+(1 / 2))=1 / 6$
Ratio of profit A: B:C $=(1 / 3) \times(1 / 4):(1 / 2) \times(1 / 6):(1 / 6) \times 1$

$$
\begin{aligned}
& =(1 / 12):(1 / 12):(1 / 6) \\
& =1: 1: 2
\end{aligned}
$$

A's share $=(1 / 4) \times 1200=300$
B's share $=(1 / 4) \times 1200=300$
C's share $=(1 / 2) \times 1200=600$

## Example 5:

$A$ and $B$ rent a field for 11 months. A puts 100 bags for 9 months. How many bags can be put by $B$ for 3 months if the ratio of their rent is $2: 3$ ?

Solution: Let $B$ puts $X$ bags.
the ratio of rent of $A$ : $B$ is 2:3
so, $(100 \times 9):(X \times 3)=2: 3$
$X=450$ bags

## Example 6:

If $A$ and $B$ entered into a partnership and invested their capital in the ratio of 19:15. At the end of 19 months, $B$ withdraws his capital. If they share profit in the ratio of $3: 2$, then for how many months $A$ invested his ratio?

Solution: Let A invested for X months.
Ratio of profit A: B $=\mathrm{X} \times 19: 19 \times 15$
So, 19X : $19 \times 15=3: 2$

$$
X=22(1 / 2) \text { months }
$$

## Example 7:

Sandeep, Vineet and Shekhar are three partners. Sandeep receives $1 / 5$ of the profit and Vineet and Shekhar share the remaining profit equally. If Vineet's income is increased by Rs. 650 when the profit rises from $10 \%$ to $15 \%$. Find the capitals invested by Sandeep, Vineet and Shekhar and total capital invested.

Solution: As given, the profit share of Sandeep is $1 / 5$, remaining profit ( $1-1 / 5$ ) $=4 / 5$ is shared between Vineet and Shekar equally.
So, the profit share of Vineet $=2 / 5$ and profit share of Shekhar $=2 / 5$
when profit \% increases, Vineet's income increase by Rs. 650
$(15 \%-10 \%)=5 \%=650$
$100 \%=13000$
So, Vineet's capital $=13000$
i.e $(2 / 5)$ of total capital $=13000$
total capital $=32500$
and Shekhar's capital $=13000$
Sandeep's capital i.e ( $1 / 5$ ) of total capital or $1 / 2$ of (Vineet or Shekhar's Capital)
$=6500$

## Example 8:

$A, B$ and $C$ start a business. Twice the capital of $A$ is equal to thrice the capital of $B$ and Capital of $B$ is four times of the capital of $C$. What will be A's share if the profit earned is Rs. $2,75,00$

Solution: Let the capital of $C$ is $C$.
Given, $2 A=3 B$ and $B=4 C$
So, $2 \mathrm{~A}=3 \times 4 \mathrm{C}=12 \mathrm{C}$
$A=6 C$
Hence the ratio of capital $A: B: C=6: 4: 1$
so, Share of $A=(6 / 11) \times 2,75,000=1,50,000$

## Example 9:

$A$ and $B$ are partners in a business. They invest in the ratio 5:6, at the end of 8 months B withdraws. If they receive profits at the end of the year in the ratio of 5: 9, find how long A's investment was used? (SBI PO Pre 2016 Memory based)

Solution: Let A's investment used for X months.
Given, the ratio of invest $(A: B)=5: 6$
ratio of time $=X: 8$
the ratio of profit $=5 \mathrm{X}: 6 \times 8$ and given ratio of profit $=5: 9$
so $5 \mathrm{X} / 48=5 / 9$
$X=48 / 9$
$X=16 / 3$ months

## Example 10:

$A, B$ and $C$ started a business with their investments in the ratio 1:2:4. After 6 months $A$ invested the half amount more as before and $B$ invested same the amount as before while $C^{C}$ withdrew $(1 / 4)^{\text {th }}$ of his investment after the 9 months. Find the ratio of their profits at the end of the year. (SBI Clerk Mains)

Solution: Ratio of investments $A: B: C=1: 2: 4$, there are no changes in the investment of $A$ and $B$ up to 6 months and in the investment of $C$ up to 9 months
At the end of 6 months, A invested half the amount more as before so A's investment $=1+(1 / 2)$
Similarly B invest the same amount more as before $=2+2=4$
But, $C$ withdraw the $(1 / 4)^{\text {th }}$ of the amount after 9 months $=4-1=3$
ratio of profit $=(1 \times 6+(3 / 2) \times 6):(2 \times 6+4 \times 6):(4 \times 9+3 \times 3)$

$$
\begin{aligned}
& =15: 36: 45 \\
& =5: 12: 15
\end{aligned}
$$

## Example 11:

A sum of money is divided amongst $P, Q$ and $R$ in the ratio of 3: 4: 5. Another amount is divided amongst $A$ and $B$ in the respective ratio of 2 : 1 . If $B$ got Rs. 1050 less than $Q$, what is the amount received by $R$ ?

Solution: Let the sum of money divided amongst $P, Q$ and $R$ is $3 x, 4 x$ and $5 x$ respectively and the sum of money divided amongst $A$ and $B$ is $2 y$ and $y$ respectively.
$4 x-y=1050$
another relation between x and y cannot be established. So, it cannot be determined.

Directions (12-15): In the following table, the investments and profit of three persons is given for different years in a joint business.

|  | Investments (In Rs.) |  |  | Profi | Rs.) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | A | B |  |  | B | C |
| 2010 | 15000 | --- |  | ----- | 82500 | 115000 |
| 2011 | ----- | 000 |  | -- | 15000 | 17500 |
| 2012 |  |  | 18000 | 42000 | 27000 | 24000 |
| 2013 |  | 17000 | 10000 | ---- | ----- | 14000 |
| 14 | 11000 | 20000 | ---- | ---- | ---- | --- |

Note:

1. Except for the year 2012, they invested the amounts for the same period.
2. Some values are missing. You have to calculate these values per given data.

## Example 12:

If the total profit in 2011 is 45000 , then find the ratio of the investment of $B$ in 2010 to the investment of A in 2011.

Solution: profit of A in 2011 is $45000-(15000+17500)=12500$
B makes the profit of 15000 by investing 6000
So, investment of A in $2011=(6000 / 15000) \times 12500=5000$
In 2010, 23000 investment of C makes the profit of Rs. 115000
So, investment of $B=(23000 / 115000) \times 82500=16500$
required ratio of $(B: A)$ is $16500: 5000=33: 10$

## Example 13:

If the total investment in 2014 is 46000 , then the ratio of profit in 2014 is?
Solution: investment of C is $46000-(20000+11000)=15000$
Time period is the same, so the ratio of profit will be also same as the ratio of investment $=11: 20: 15$

## Example 14:

In the year 2012 total investment of $A$ and $B$ is $30000, A$ and $B$ invested their amount for 4 months and 6 months respectively then find the number of months that C invested his amount?

Solution: ratio of profit $(A: B)=42000: 27000$

$$
A \times 4: B \times 6=42000: 27000
$$

$$
A: B=21 ; 9=7: 3
$$

So, investment of $A$ is 21000 and investment of $B$ is 9000 .
let C invested 18000 for $X$ months.
So, $(18000 \times X):(21000 \times 4)=24000: 42000$
$X=(8 / 3)$ months, Hence $C$ invested for $8 / 3$ months.

## Example 15:

If the total profit in the year 2013 is 58800 then the investment of $A$ is?
Solution: Rs. 10000 investment of C gives a profit of Rs. 14000 then, Rs. 17000 investment of $B$ will give the profit of Rs. (14000/10000)× $17000=23800$
So, profit of A is $58800-(14000+23800)=21000$
Investment of $A$ is $=(14000 / 10000) \times 21000=15000$

## Partnership

## Q1.

A and B started a business by investing 36,000 and Rs. 63,000 . Find the share of each, out of the annual profit of Rs. 5500.
(a)2000, 3500
(b) 2500,3500
(c) 3500,2500
(d) None of these

Q2.
A starts some business with Rs. 50,000. After 3 months B joins him with Rs. 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

Q3.
A started a business by investing Rs. 36,000. After 4 month B joined him with some investment. At the end of the year, the total profit was divided between then in the ratio of 9:7 How much capital was invested by B in the business?
(a) Rs. 40,000
(b) Rs. 42,000
(c) Rs. 41,000
(d) None of these

## Q4.

A started some business with Rs. 26,000 After 3 months B joined him with Rs. 16,000 . After some more time C joined them with Rs. 25,000. At the end of the year, cost of total profit of 15453 , C gets 3825 as his share. How many months after B joined the Business did c Join?
(a) 3
(b) 4
(c) 5
(d) None of these

Q5.
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 $1 / 4$ th of the their investments. Find the ratio of their profits at the end of the year.
(a) 5: 12:13
(b) $5: 1: 14$
(c) $5: 12: 14$
(d) none of these

## Q6.

A started a business with Rs. 52,000 and after 4 months B joined him with Rs. 39,000. At the end of the year out of the total profit B received total 20,000 including 25\% of the profit as commission for managing. What amount did A receive
(a) Rs 20,000
(b) Rs 10,000
(c) Rs15,000
(d) None of these

Q7.
A working partner gets $20 \%$ as his commission of the profit after his commission is paid, If the working partner's commission is Rs. 8000, Then what is the total profit in the business?
(a) Rs. 47,000
(b) Rs.48,000
(c) Rs. 45,000
(d) None of these

Q8.
Pardeep Kumar 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 $1:(3 / 2)$ : 2 , then the shares of $P, Q$ and $R$ are respectively.
(a) Rs. 2,40,000; Rs. 3,20,000; Rs. 1,60,000
(b) Rs.3,20,000; Rs.2,40,000; Rs. $1,60,000$
(c) Rs.1,60,000; Rs.23,20,000; Rs.22,40,000
(d) Rs.1,60,000; Rs.2,40,000; Rs.3, 20,000

Q9.
We have to divide a sum of Rs. 13,950 among three persons A, B and C. B must get the double of A's share and C must get Rs 50 less than the double of B's share.
The share of A will be : Rs 13,950
(a) Rs. 1950
(b) Rs. 1981.25
(c) Rs. 2000
(d) Rs. 2007

## Q10.

A started business with Rs. 45,000 and $B$ joined afterward with 30,000 . If the profit at the end of the of one 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

Q11.
$X$ 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) 1.5 months
(d) 14 months

## Q12.

Four milkmen rented a pasture. M put to graze 16 cows for 3 months and N 42 cows for 4 months, 018 cows for 6 months and P 42 cows for 2 months. If M's share of rent be Rs. 2400, the rent paid by 0 is.
(a) Rs. 3200
(b) Rs. 420018.
(c) Rs. 4000
(d) Rs. 5400

Q13.
A, B and C subscribe Rs. 47000 for a business. If $A$ subscribes Rs. 7,000 more than B and B Rs. 5,000 more than C, then out of total profit of Rs. 4700, C receives.
(a) Rs. 1200
(b) Rs. 450019.
(c) Rs. 1000
(d) None of these

## Q14.

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) Rs. 2500
(b) Rs. 1500
(c) Rs. 1800
(d) Rs. 650

## Q15.

Two partners X and Y start a business by investing Rs. 50,000 and 40,000 respectively, What will the ratio of their profits at the end fo the year
(a) $5: 4$
(b) $3: 6$
(c) $4: 5$
(d) $6: 3$

## Q16.

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) $9: 18$

Q17.
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

Q18.
A and B started a business investing amount of Rs. 1, 85,000 and Rs. $2,25,000$ respectively. if B's share in the profit earned by them is Rs. 9,000 then what is the total profit earned by them together?
(a) Rs. 17,000
(b) Rs. 16,400
(c) Rs. 16,800
(d) Rs. 17,800

## Q19.

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

## Q20.

A and B invested amount of Rs 40,000 and 75,000 respectively. At the end of five year they got a total dividend of Rs. 46,000, what is A share in the dividend?
(a) Rs. 16,500
(b) Rs. 15,500
(c) Rs. 15,000
(d) Rs. 16,000

## Q21.

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

Q22.
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 amount of 85,000 . There after $B$ did not invest any additional amount. On Completion of four year form the opening of workshop they earned an amount of Rs. $1,95,000$. What will be A's share in the earning.
(a) 8500
(b) $1,10,000$
(c) $1,35,00$
(d) 95,000

Q23.
X and Y started a business with their capitals in the ratio 7:9. At the end of 8th month, X withdraws his capital. If they receive 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

Q24.
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

Q25.
Two partners invest Rs. 125,000 and Rs. 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 Rs. 300 more than the other. Find the total profit made in the business.
(a) Rs. 3739.50
(b) Rs. 3937.50
(c) Rs. 3749.50
(d) Rs. 3947, 50

## Q26.

Two brother invested Rs. 50,000 and Rs. 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 Brother gets Rs. 90 more than the other, Find the total profit made in the business.
(a) Rs. 1200
(b) Rs. 1400
(c) Rs. 1600
(d) Rs. 1800

Q27.
The investments made by X and Yare 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

## Q28.

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) $3: 2: 1$

Q29.
$X$ and $Y$ entered into a partnership investing Rs. 16,000 and Rs. 2,000 respectively. After 3months X withdrew Rs. 5000 , while $Y$ invest Rs. 5000 more. After 3 months, Z joins the business with a capital of Rs. 21,000. After a year they obtained a profit of Rs 26,400 . By what amount does exceed the share of $Z$.
(a) Rs. 3600
(b) Rs. 3800
(c) Rs. 4600
(d) Rs. 4800

Q30.
$\mathrm{X}, \mathrm{Y}$ and Z are partner in a business. If X 's capital is twice of Y's capital and Z'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) $3: 1: 5$

Q31.
$X$ 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 Rs. $1,57,300$ then what is $Y$ share?
(a) Rs. 48,400
(b) Rs. 58,809
(c) Rs. 48,810
(d) Rs. 47,782

## Q32.

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

Q33.
$\mathrm{A}, \mathrm{B}$ and C are three partners in a business, A , whose money has been1. used for 4 months, claims $1 / 8$ of the profit, $B$ whose money has been used for 6 months, claims $1 / 3$ of the profit. C had invested Rs. 1560 for 8 months. How much money did A and B contribute?
(a) 740,1250
(b) 730,1240
(c) 720,1280
(d) Rs. 750, 126034

## Q34.

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

Q35.
$A$ and $B$ are two partners in a firm sharing the profit in the ratio 4 : 5. If the firm earns a profit of Rs. 14,130 then profit to be received by $B$
(a) 6,280
(b) 7,850
(c) 1,570
(d) 3,140

## Q36.

$X$ and $Y$ take a grass ground on lease for K300 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) $2: 1$

Q37.
$A$ and $B$ started a business investing amounts in the ratio of $2: 3$. If A has an additional amount of Rs. 10,000, their ratio of investment would have been $3: 2$, The amount invested by A was :
(a) Rs. 8,000
(b) Rs. 12,000
(c) Rs. 18,000
(d) Rs. 20,000

## Q38.

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

Q39.
A, B and C started a business with R47,000. A puts in Rs. 5,000 more than B and B 3,000 more than C. The share of A out of the profit of Rs. 14, 100 will be :
(a) Rs. 3,600
(b) Rs. 4,500
(c) Rs. 6,000
(d) Rs. 6,300

## Q40.

$A$ 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) $6: 5$

## Q41.

A, B and C hired a car for Rs. 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) Rs. 960
(b) Rs. 1120
(c) Rs. 1,260
(d) Rs. 1,760

## Q42.

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

## Q43.

A is working partner and $B$ is sleeping partner in business. A puts in Rs. 5,000 and B puts in 6000 Rs. 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 Rs. 880 in all is:
(a) Rs. 132
(b) Rs. 340
(c) Rs. 472
(d) Rs. 492

## Q44.

A starts business with a capital of Rs. 14,000 , five months 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

Q45.
$\mathrm{A}, \mathrm{B}$ and C become partners in a business. A contributes $1 / 3$ of the capital for $1 / 4$ of the time B contributes $1 / 5$ of the capital for $1 / 6^{\text {th }}$ of the time and $C$ the rest of the capital for the whole time. If the profit is Rs. 1,820 , then the A's share in profit is
(a) Rs. 130
(b) Rs. 260
(c) Rs. 292
(d) Rs. 304

## Q46.

In a business A and B gained some amount in a certain ratio. B and C received the profit in the same ratio as that of $A$ and B. If A received Rs. 6,400 and C received Rs. 10,000 . Find the share of B.
(a) Rs. 2000
(b) RS. 4,000
(c) Rs. 8,000
(d) Rs. 10,000

## Q47.

The capital of A and B are Rs. 20,000 and Rs. 4,000 respectively. A is entitled to be paid a salary of 1,200 per annum being a working partner. If the gross profit for one year is Rs. 1,800, their shares in the profit are respectively
(a) Rs. 500, Rs. 3100
(b) Rs. 1200, Rs. 3600
(c) Rs. 1,700, Rs. 1,300
(d) Rs. 1,700, Rs. 100

## Q48.

A and B are partners who share profit and loss in the ratio of $3: 2$, They agree to take $C$ into partnership of $1 / 4^{\text {th }}$ share of profit. The new profit sharing ratio will be :
(a) $9: 6: 5$
(b) 5: 6: 9
(c) 6:5:9
(d) $9: 5: 6$

Q49.
A and B share profits and losses in a firm in the ratio of 3 $: 2$ centered in this first as new partner his profit sharing ratio is $1 / 4$. If $C$ has taken his share of profit from $A$ and $B$ in equal ratio, then the new profiting ratio will be
(a) $19: 11: 1$
(b) $19: 11: 10$
(c) $10: 11: 9$
(d) 10: $11: 19$

Q50.
$A, B$ and $C$ share the profit in the ratio of $2: 3: 7$. If the average gain is 38,000 , then B's share is :
(a) Rs. 2,000
(b) Rs. 1,000
(c) Rs. 21,500
(d) Rs. 6000

## Q51.

$A, B$ and $C$ share profit in the ratio of $1 / 4: 1 / 6: 1 / 2$. If $C$ retires, they share the profit of $C$ in the ratio of $4: 5$ respectively. The new profit sharing ratio of $A$ and $B$ will be :
(a) $55: 53$
(b) $53: 55$
(c) $5: 3$
(d) $3: 5$

Q52.
A, B and C enter into partnership. A puts in Rs. 1200 for 6 months, B Rs. 800 for 7 months and C Rs. 600 for 8 months. The share of A out of a profit of Rs. 396 is ;
(a) Rs. 162
(b) Rs. 62
(c) Rs. 108
(d) Rs. 18

Q53.
$A$ and $B$ enter into partnership investing Rs. 48,000 and Rs. 60,000 respectively. After 3 months, A withdraws Rs. 8,000 while B invests Rs. 6,000 after 6 months of starting of business. Out of the total amount of profit, if A gets Rs. 12,000 as his share at the end of the year total profit is :
(a) Rs. 24,000
(b) Rs. 30,000
(c) Rs. 36,000
(d) Rs. 37,000

## Q54.

M, P and Q together started a business. M invested Rs. 6,500 for 6 months, $P$ invested Rs. 8,400 for 5 months and Q invested Rs. 10,000 for 3 months. M is working member for which he gets $5 \%$ of total profit extra. If the total gain is Rs. 7,400, then Q's share is :
(a) 1,900
(b) 2,100
(c) 3,200
(d) Data are incomplete

Q55.
A,B and C jointly start a business A puts in Rs. 15,000 for 8 months B puts in Rs. 12,000 for 9 months and C puts in Rs. 8,000 , for the whole year. In the end of the year there is a profit of Rs. 10,800 . The difference between .A's share and C share in the profit will be
(a) 800
(b) 600
(c) 1200
(d) 1800

## Q56.

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

Q57.
A starts a business with Rs. 45,000. After 6 months B enters in his business with Rs. 80,000. After one year C invests Rs. 120,000. In what ratio the profit will be divided among $\mathrm{A}, \mathrm{B}$ and C after two years?
(a) $9: 16: 24$
(b) $3: 4: 4$
(c) $3: 4: 8$
(d) $3: 3: 8$

Q58.
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) Rs. 1125, 1825, 2250
(b) Rs. 1125,1800, 2250
(c) Rs. 1125, 1870, 2250
(d) Rs. 1145, 1256, 2350

Q59.
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, second after 9 months and third remained in the business for the whole year. At the end of year the total profit earned is Rs. $1,60,480$. Then find their shares of profit.
(a) Rs. 16840 , Rs. 44188 , Rs. 92686
(b) Rs. 16048 , Rs. 48144 , Rs. 96288
(c) Rs. 16042, Rs. 14842, Rs. 9862
(d) Rs. 15000, Rs. 13423, Rs. 7562

## Q60.

A, B and C have invested a sum of Rs. 12500 in a business. B invested Rs. 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) Rs. 7490 , Rs. 11984 , Rs. 17976
(b) Rs. 8480 , Rs. 7550 , Rs .8560
(c) Rs.7940, Rs. 7054 , Rs. 17500
(d) Rs.5100, Rs.6943, Rs. 7140

Q61.
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. 7,000 as a share of their profit. Then after how many months. A joined the business.
(a) 1 month
(b) 4 months
(c) 2 months
(d) 3 months

Q62.
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) Rs. 29,000, Rs. 18,000
(b) Rs. 25,000, Rs. 30,000
(c) Rs. 15,000 , Rs. 10,000
(d) Rs. 15,000, Rs. 20,000

## Q63.

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

Q64.
A and B started a business by investing Rs. 36,000 and Rs. 45,000 respectively. After 4 months B with draws $4 / 9$ of his investment its 5 months After she again invested $11 / 9$ 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, Rs. 15,500
(b) B, Rs. 12, 450
(c) A, Rs. 14,245
(d) B, Rs. 13,560

## Q65.

A, B and C started a business by investing Rs. 24,000, Rs. 32000 and Rs. 18000 respectively, 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) Rs. $4,70,000$
(b) Rs. 3,70,00
(c) Rs. $3,45,000$
(d) Rs. 1, 57,00066

## Q66.

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

## Q67.

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) Rs. 180, Rs. 120, Rs. 144
(b) Rs. 150, Rs. 130, Rs. 123
(c) Rs. 160 Rs. 141, Rs. 125
(d) Rs. 141, Rs. 110, Rs. 140

Q68.
$A$ 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 share of their profit, if the profit is Rs. 4000
(a) Rs. 3000 each
(b) Rs. 2500 each
(c) Rs. 1500 each
(d) Rs. 2100 each

Q69.
A, B and C are partners in a business partnership. An invested Rs. 4000 for whole year. B invested Rs. 6000 initially but increased this investment upto Rs. 8000 at the end of 4 months, while C invested Rs, 8000 initially, 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) Rs. 3600, Rs.6600, Rs. 6750
(b) Rs.2000, Rs. 33050 , Rs. 55400
(c) Rs.2450, Rs. 2460 , Rs. 1456
(d) None of these

## Q70.

A, B and C started a business in partnership and invested in the ratio of $1 / 4: 1 / 3: 1 / 6$. After 4 months $A$ withdraw half of his investment and after its 2 months $B$ withdraws $1 / 3$ of its investment. If the total earned
profit at the end of year is Rs. 14,000 . Find the share of their profit
(a) Rs. 1500 , Rs. 2450 Rs. 2145
(b) Rs.3000, Rs. 4500, Rs. 2100
(c) Rs.4000, Rs. 3500 , Rs. 1254
(d) Rs.4200, Rs.5600, Rs. 4200

Q71.
Three partners A, B and C invested in the ratio of 5/4:4/5:6/5 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) Rs. 12,000
(b) Rs. 16,500
(c) Rs. 13,000
(d) Rs. 15,600

## Q72.

Out of total capital required to start a business A invested $30 \%$, B Invested $2 / 5$ 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 capital given by $B$, then find how much C invested in the business?
(a) Rs. 25000
(b) Rs. 10000
(c) Rs. 15000
(d) Rs. 12450

ANSWER :

| 1 a | 2 d | 3 b | 4 a | 5 c | 6 a |  | 8 d | 9 c | 10 c | 11 a | 12 d | 13 c | 14 b | 15 a |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 16 c | 17 a | 18 b | 19 d | 20 d | 21 c | 22 b | 23 c | 24 d | 25 b | 26 d | 27 b | 28 a | 29 a |
|  | 30 a | 31 a | 32 a | 33 c | 34 d | 5 | 36 b | 37 a | 38 d | 39 c | 40 a | 41 b | 42 c | 43 c |
|  | 44 b | 45 b | 46 c | 47 d | 48 a | 49 b | 50 d | 51 a | 52 a | 53 b | 54 a | 55 a | 56 b | 57 |
| b | 58 c | 59 b | 60 a | 61 b | 62 d | 63 c | 64 d | 65 b | 66 c | 67 a | 68 d | 69 a | 70 d | 71 |
| b | 72 c | 73 a | 74 |  |  |  |  |  |  |  |  |  |  | b |

1. 

| (a) A |  |
| :--- | :--- |
| Capital $\rightarrow 36,000:$ | B |
| 4 | 63,000 |

Note $\rightarrow$ When time is same then profit will divided in the ration of their capital.
$\therefore(4+7)$ units $=$ Rs. 5500
11 units = Rs. 5500
1 unit = Rs. $5500 / 11=$ Rs. 500
Share of $A=500 \times 4=$ Rs. 2000
Share of $B=500 \times 7=$ Rs. 3500
2. (d) $A$ : B

Capital $\rightarrow$ 50,000 : 70,000


Q73.
A and B started a business in partnership by investing in the ratio of $7: 9$. After 3 months. A withdraw $2 / 3$ of its investment and after 4 months from the beginning $B$ withdraw $100 / 3 \%$ 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) Rs. 3535, Rs. 6666
(b) Rs. 3055 , Rs. 5555
(c) Rs. 4503 , Rs. 1345
(d) Rs. 3545, Rs 3333

## Q74.

Three partners invested Rs. 42000, Rs. 48000 and Rs. 32000 respectively. Partnership condition is that, each will the get interest on his capital at the rate of $7 \%$ p.a. 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) Rs. 12960
(b) Rs. 11340
(c) Rs. 8640
(d) None of these

Required Ratio of profits = $20: 21$
3. (b) Let the capital invested by $B=$ Rs. $X$

|  | $A$ | $:$ |
| :--- | :--- | :--- |
| Capital $\rightarrow 36,000$ | $:$ | $x$ |
| Time $\rightarrow 12$ | $:$ | 8 |
|  | 3 | $:$ |
| Profit $\rightarrow 108,000$ | $:$ | $2 x$ |

According to the question,
$108,000 / 2 x=9 / 7$
$x=108,000 / 18=42,000$
Required investment $B=$ Rs. 42,000
Alternate : Note :- To save your valuable time in such type of question try to use below given formula.
$\mathrm{C}_{1} \times \mathrm{T}_{1} / \mathrm{C}_{2} \times \mathrm{T}_{2}=\mathrm{P}_{1}=/ \mathrm{P}_{2}$
Where $\mathrm{C}_{1}$ and $\mathrm{C}_{2}$ are the capitals.
$\mathrm{T}_{1}$ and $\mathrm{T}_{2}$ are time periods.
$P_{1}$ and $P_{2}$ are profits.
Let capital invested by $B=R s$. $X$
$36000 \times 12 / x \times 8=9 / 7$
$x=$ Rs. 42000
4. (a)

According to the question,
$(312+144+25 \mathrm{~T})$ units $=15,453$
1 unit = 15,453/(456+25T)
Share of C
$=14,453 /(456+25 \mathrm{~T}) \times 25 \mathrm{~T}=3825$
Note : Because C's share $=$ Rs. 3825.
$101 \mathrm{~T}=456+25 \mathrm{~T}$
$76 \mathrm{~T}=456$
T = 6 months
Required time $=(9-6)=3$ months
Therefore $C$ joined 3 months later than $B$ joined
5. (c) Note : We can assume values as per our need out the ration of values should not be changed.

A : B:C
Capital $\rightarrow 2 x: 4 x: 8 x$
Total capital invested by $A=(2 x+6+3 x \times 6)=$ 30x
Total capital invested by $B=(4 x \times 6+8 x \times 6)=$ 72x

Total capital invested by C $=(6 \times 8 x+6 x \times 6)$
$(48 x+36 x)=84 x$

New ratio of capitals:

> A : B : C

| Capital $\rightarrow$ 30x:72x:84x |
| :--- |
| Profit $\rightarrow 5: 12: 14$ |

Note : Profit would be divided in the ratio of their capitals.
Required ratio of their profit $=5: 12: 14$
6.

| (a) | A | $:$ |
| :--- | :---: | :--- |
| Capital $\rightarrow$ | 52,000 |  |
|  | 4 | 39,000 |
| Profit $\rightarrow$ | 12 | $:$ |
|  | 3 | 8 |
|  | 3 | 2 |
| Profit $\rightarrow$ | 12 | $:$ |
|  | 2 | $:$ |
|  |  | 1 |

Let profit of $A=200$
and Profit of $B=100$
Total Profit = 300 units
Per running business $B$ received
$=300 \times 25 / 100=75$ units
Note : Remaining profit will be divided in the ration of their capitals.
$\therefore$ Profit of $A=225 / 3 \times 2=150$ units
Profit of $B=225 / 3 \times 1=75$ units
Total profit of $B=(75+15)=150$ units

According to the question,
150 units = Rs. 20,000
1 unit $=$ Rs. $20,000 / 150 \times 150=$ Rs. 20,000
7. (c) Let the total profit $=$ Rs. K .

According to the question,
Remaining profit after paying 20 \% working
Partner's commission $=(\mathrm{k}=8000)$
$\therefore(\mathrm{K}=8000) \times 20 / 100=8000$
$\mathrm{k}=48000$
$\therefore$ Total profit $=$ Rs. 48,000
8. (d) $P$ : Q : R

Capital $\rightarrow 1$ : 3/2
Profit $\rightarrow 2$ : 3
Note : Profit would be divided in the ration of their capitals.
Profit $=(2 x+3 x+4 x)=9 x$ units
According to the question,
$9 x=9,00,000 \times 80 / 100$
$9 x=7,20,000$
80,000
Profit of $P=2 x=2 \times 80,000=$ Rs. $1,60,000$
Profit of $Q=3 x=3 \times 80,000=$ Rs. $2,40,000$
Profit of $R=4 x=4 \times 80,000=$ Rs. 3,20,000
(c) Let the share of $A=R s . X$

According to the question,

10. (c) Capital of $A$ (i) Rs. 45,000

Capital of B (ii) Rs. 30,000
Ration of $\mathrm{P}_{1}: \mathrm{P}_{2}=2: 1$

Now by using formula,
$\frac{\mathrm{C}_{1} \mathrm{~T}_{1}=\mathrm{P}_{1}}{\mathrm{C}_{2} \mathrm{~T}_{2}=\mathrm{P}_{2}}$
$\frac{45000 \times 12}{30000 \times T_{2}}=\frac{2}{1}$
$\mathrm{T}_{2}=9$
Then B would join business after = 3 months
11.
(a) Let $\mathrm{Y}^{\prime}$ 's investment is used for T months
$\rightarrow$ Now by using formula.
$\frac{5 \times 8}{6 \times \mathrm{T}_{2}}=\frac{5}{9}$
$\mathrm{~T}=12$ months
12. (d)

|  | M N | 0 | P |
| :---: | :---: | :---: | :---: |
| No. of lows $\rightarrow$ | 16 20 | 18 | 42 |
| Time $\quad \rightarrow$ | $3{ }_{2}$ | 6 | 2 |
| Ratio of Rent $\rightarrow 48: 80: 108: 84$ |  |  |  |
|  | 12 : 20 | 27 | 21 |

According to the question, 12 units Rs. 2400 1 unit = Rs. 2400/12
27 units $=$ Rs. $2400 / 12 \times 27=$ Rs. 5400
13. (c) Let C subscribes the business $=$ Rs. X

|  | A | B |
| :---: | :---: | :---: |
| Capital $\rightarrow$ | $(\mathrm{x}+12000)$ | $:(x+5000)$ |

Note : Profit would be divide in the ratio of their capitals.
According to the question,
$(x+12000)+(x+5000)+x=47000$
$3 x+17000=47000$
$3 x=30000$
$x=10,000$

|  | A | $:$ | B | $:$ |
| :--- | :---: | :---: | :---: | :---: |
| C |  |  |  |  |
| Capital $\rightarrow$ | 22,000 | $:$ | 15000 | $:$ |
| Profit $\rightarrow$ | 22 | $:$ | 15 | $:$ |

$(22+15+10)$ units $=4700$
1 unit $=4700 / 47=100$
Share of $C=10$ units $=10 \times 100=$ Rs. 1,000
14.
(b) A

|  | $:$ |
| :--- | :--- |
| $1_{\times 5}$ | $:$ |
| $B$ | $:$ |
| $1_{\times 3}$ | $:$ |

B+C
2×5.....(i)
A+C
4×3....(ii)

Note : The total sum of $A, B$ and $C$ will be same.
So equate the sum of both the equations.
After that new ration, ( $A, B$ and $C$ )
A : B+C
5 : 10........(iii)
B : A+C
S : 12.........(iv)
From equation (iii) and (iv)
$\begin{array}{lllll}\mathrm{A} & : & \mathrm{B}: & \mathrm{C} \\ 5 & : & 3 & : & 7\end{array}$
According to the question, ( $5+3+7$ ) units = Rs. 11,250
15 units = Rs. 11,250
1 unit = Rs. 750
Different in shares of $A$ and $B$
$=(5-3) \times 750=$ Rs. 1500
15.


Note : Always remember when time is same the Profit
Will be divided in the ratio of their profit.
16. (c) $X$ : $Y$

| Capital $\rightarrow$ | 25,000 | $:$ | 20,000 |
| :--- | :---: | :---: | :---: |
|  | 5 | $:$ | 4 |
| Time $\rightarrow$ | 12 | 8 |  |
| Profit $\rightarrow$ | 60 | $:$ | 32 |
|  | 15 | $:$ | 8 |

$\therefore$ Hence Required ratio $=15: 8$
17. (a) Capital of $A=$ Rs. 21,000
(a) Capital of $A=$ Rs. 21,000

By using formula, $C_{1} T_{1}=P_{1}$ $\mathrm{C}_{2} \mathrm{~T}_{2}=\mathrm{P}_{2}$ $\frac{21000 \times 12}{36000 \times t 2}=\frac{1}{1}$
$\mathrm{T}_{2}=7$ months $\therefore$ so B joined business after (12-7=5) months
18. (b)

19. (d)


Total profit $=(45,000+72,000)=$ Rs. $1,17,000)$
20. (d) A : B

40,000 : 75,000

| Time $\rightarrow$ | 5 | $:$ | 15 |
| :--- | :--- | :--- | :--- |
| Profit $\rightarrow$ | 8 | $:$ | 15 |

Note If time is same than ration of their profit will be divided in the ratio of their capital.

Capital $\rightarrow$ 1,85,000 : 2,25,000
Profit $\rightarrow 37$ : 45

Total profit $=(7400+9000)=$ Rs. 16,400


| (d) | A |  | B |  |
| :--- | :---: | :---: | :---: | :---: |
|  | 40,000 | $:$ | 75,000 |  |
|  | 8 | $:$ | 15 |  |
|  | 5 | $:$ | 15 |  |
| Time $\rightarrow$ | 5 |  |  |  |

$$
15 \text { units }=8 \times 2,000=\text { Rs. } 16,000
$$

$$
\begin{aligned}
& \therefore(8+15) \text { units }=\text { Rs. } 46,000 \\
& 23 \text { units }=\text { Rs. 46,000 } \\
& 1 \text { units = Rs. } 2,000
\end{aligned}
$$

(a) $X \quad: \quad Y$
$\therefore$ share of $A=$ Rs. 16,000
21. (c)

|  | A | $:$ | $B$ |
| :--- | :---: | :--- | :---: |
| Capital $\rightarrow 25,000$ | $:$ | 30,000 |  |
|  | 5 | $:$ | 6 |
| Time $\rightarrow$ | 2 | $:$ | 1 |
| Profit $\rightarrow$ | 10 | $:$ | 6 |
|  | 5 | $:$ | 3 |

According to the question,
$(5+3)$ units $=$ Rs. 46,000
8 units = Rs. 46,000
1 unit = Rs. 46,000/8
3 unit $\quad=$ Rs. $46,000 / 8 \times 3=$ Rs. 17,250
Hence share of $B=$ Rs. 17,250
22. (b) Total investment of $A$ in 4 years
$=40,000+50,000+60,000+70,000$
= Rs. 22,00,000
Total investment of $B$ in 2 years
$=85,000 \times 2=1,70,000$
A : B
Capital $\rightarrow$ 22,000 : 17,000
Profit $\rightarrow 22$ : 17
According to the question,
(22+17) units = Rs. 1,95,000
39 units = Rs. 1,95,000
1 unit = Rs. 1,95,000/39
22 units $=$ Rs. $1,95,000 / 39 \times 22=$ Rs. $1,10,000$
23. (c) Let the $Y^{\prime}$ s capital was used to $T$ months According to the question,
$\frac{7 \times 8}{9 \times T}=\frac{8}{9}$
$\mathrm{T}=7$ months
Hence the capital of $T$ was used for 7 months
24. (d) Let the capital of $Y$ was used for $T$ months

According to the question,
$\frac{5 \times 8}{6 \times T}=\frac{5}{9}$
$\mathrm{T}=12$ months
Hence the capital of $Y$ was used for 12 months
25. (b)


According to the question,
Note : $60 \%$ of profit should be divided equally between them
8 units = Rs. 300
1 unit = Rs. 300/8
42 units $=$ Rs. $300 / 8 \times 42$
$\therefore 40 \%$ of profit $=$ Rs. $300 / 8 \times 42$
Total profit $=$ Rs. $300 \times 100 \times 42=$ Rs. 3937.50
26. (d) $\quad 1^{\text {st }}$ Brother : $2^{\text {nd }}$ brother Capital $\rightarrow \quad 50,000 \quad: \quad 70,000$

$=57$ units
According to the question,
57 units = Rs. 8550/57
100 units $=$ Rs. $8550 / 57 \times 100=$ Rs. 15,000
Alternate : X : Y
3 : 2
3 units = Rs. 8550
1 unit $=$ Rs. $8550 / 3=$ Rs. 2850
5 units $=2850 \times 5=$ Rs. 14250
Note : $5 \%$ of total profit is donated
$\therefore 95 \%$ of total profit $=$ Rs. 14250
1 \% of total profit = Rs. $14250 / 95$
$100 \%$ of total profit $=$ Rs. $14250 / 95 \times 100$
= Rs. 15,000
27. (b) Let the total profit $=100$ units

Remaining profit after donation $=100-$
$100 \times 5 / 100=95$ units
$\therefore$ share of $\mathrm{X}=95 /(3+2) \times 3=57$ units
According to the question,
57 units = Rs. 8550
1 unit = Rs. $8550 / 57$
100 units $=$ Rs. $8550 / 57 \times 100=$ Rs. 15,000
Alternate : X : Y
3 : 2
3 units = Rs. 8550
1 unit $=$ Rs. $8550 / 3=$ Rs. 2850
5 units $=2850 \times 5=$ Rs. 14,250
Note : 5 \% of total profit is donated
$\therefore 95$ \% of total profit = Rs. 14250
$1 \%$ of total profit = Rs. $14250 / 95$
$100 \%$ of total profit $=$ Rs. $14250 / 95 \times 100$
$=$ Rs. 15,000
28. (a)

|  | A $:$ | B $:$ | C |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- |
| Capital $\rightarrow$ | 5 | $:$ | $6:$ | 8 |  |
| Time $\rightarrow$ | 1 | $:$ | $1 / 2:$ | $3 / 2$ |  |
| Profit $\rightarrow$ | 5 | $:$ | 3 | $:$ | 12 |

Note : (i) We know
Profit $=$ Time $\times$ Capital invested
(ii) In such type of questions we should assume
value of time
as they can satisfy the ratio of profit.
$\therefore$ Required ratio of time $=1: 1 / 2: 3 / 2$
= $2: 1$ : 3
Alternate :-
Profit $=$ Time $\times$ Capital invested
Time $=$ Profit $/$ Capital invested
Required ratio of time $=\frac{5}{5}: \frac{3}{6}: \frac{12}{8}$
$=1: 1 / 2: 3 / 2$
= $2: 1 \quad: 3$
29. (a) Total capital invested by $X$ in a year
$=16000 \times 3+11000 \times 9=$ Rs. $1,47,000$
Total capital invested by Y in a year
$=12000 \times 3+17000 \times 9$
$=$ Rs. 1,89,000
Money invested by $Z=21,000 \times 6=$ Rs.
1,26,000

|  | X | $:$ | $Y$ | Z |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Capital $\rightarrow$ | 147 | $:$ | 189 | $:$ | 126 |

According to the question,
$(7+9+6)$ units $=$ Rs. 26,400
1 unit = Rs. $26,440 / 22=$ Rs. 1,200
Required difference $=(9-6) \times 1200=$ Rs. 3600
30. (a) According to the question,

=Required ratio of capital $=6: 3: 1$
31.

Note : X will be same in both cases, hence new required ratio

$$
\begin{array}{lllll}
X & : & Y & : & Z \\
6 & : & 4 & : & 3
\end{array}
$$

According to the question, $(6+4+3)$ units $=$ Rs. $1,57,300$
13 units = Rs. 1,57,300
1 unit = Rs. 12,100
4 units $=$ Rs. $12,100 \times 4=$ Rs. 48,400
$\therefore$ Share of Y $=$ Rs. 48,400
32. (a) Let the total time $=8$ years

Let the total capital $=20$ units


According to the question,
$(5+8+44)$ units $=$ Rs. 1140
57 units =Rs. 1140
1 unit $=$ Rs. $1140 / 57=$ Rs. 20
Profit of $X=20 \times 5=$ Rs. 100
Profit of $Y=20 \times 8=$ Rs. 160
Profit of $Z=20 \times 44=$ Rs. 880
33.
(c) Let total profit $=24$ units

Profit of $A=1 / 8 \times 24=3$ units
Profit of $B=1 / 3 \times 24=8$ units

34. (d) Let the capital $=18$ units

Let the time $=6$ years

| X | Y : Z |
| :---: | :---: |
| Capital $\rightarrow 3$ ) | 6 - 9 ) |
| Time $\rightarrow 1$ | $2: 6$ |
| Profit $\rightarrow 3$ | 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. $1000 \times 4=$ Rs. 4000
Share of $Y$ is Rs. 4000
35. (b) $\mathrm{A}: \mathrm{B}$

4 : 5
According to the question,
$(4+5)$ units $=$ Rs. 14,130
1 unit = Rs. $14,130 / 9=$ Rs. 1570
5 units $=5 \times 1570=$ Rs. 7850
$\therefore$ Hence share of $\mathrm{B}=$ Rs. 7850
36. (b) Total Rent = Rs. 300

|  | $X$ | $Y$ |
| :--- | :---: | :---: |
| No. of Animals | 10 | 15 |
| Time (in weeks) |  |  |
| Ratio of Rent | $5 / 50$ | $7 / 105$ |

37. (a) Initial Ratio of investment by $A$ and $B=2$ :

3
Let their respective investments are $2 x$ and $3 x$
According to the question,
If $A$ added Rs. 10,000 to his investment
Then New Ratio $=3: 2$
$2 x+10,000 / 3 x=3 / 2$
$4 x+20,000=9 x$
$5 x=20000$
$x=4000$
$\rightarrow$ Original investment by $\mathrm{A}=2 \times 4000=$
Rs. 8000
Alternative

| $A$ | $:$ | $B$ |
| :---: | :--- | :--- |
| $2 \times 2$ | $:$ | $3 \times 2$ |
| $3 \times 3$ | $:$ | $2 \times 3$ |

Note : We know A has an additional amount.
So amount of B would be same
After that new ratio
$+5<\begin{array}{ccc}A & : & B \\ 4 & : & 6 \\ 9 & : & 6\end{array}$
According to the question
5 units $=$ Rs. 10,000
1 unit =Rs. 2,000
Initial capital of $A=2000 \times 4=$ 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 T2 months
$\frac{\mathrm{C}_{1} \times \mathrm{T}_{1}}{\mathrm{C}_{2} \times \mathrm{T}_{2}}=\frac{\mathrm{P}_{1}}{\mathrm{P}_{2}}$
$11 x \times 8=2$
$12 \times \times T_{2} \quad 3$
$\mathrm{T}_{2}=11$ Months
Hence the time for which y invested his capital is 11 months
39. (c) Total investment by $A, B$ and $C=$ Rs. 47,000

Let amount invested by $\mathrm{C}=\mathrm{Rs}$. X
then amount invested by B = Rs. $(x+3000)$
and amount invested by $A=$ Rs. $(x+3000+5000)$
According to the question,
$x+(x+3000)+(x+3000+5000)=47000$
$3 x+11000=47000$
$3 x=36000$
$x=$ Rs. 12000
A
C
Ration of $(x+8000)$
$(x+3000) \quad:$
x
Amount $(12000+8000):(12000+3000):$
12000
$20,000:(12000+3000):$
12000
$20: 15$
12
Since the time for which the amounts were invested was same for all partners the ratio of amounts will be the ratio of profits.
Share of A out of total profit =
$14100 / 20+15+12 \times 2=$ Rs. 6000
40. (a) Let A's Capital = Rs. X

Let B's Capital = Rs. Y
Now, According to the question,

$$
A \quad B
$$

Capital $\rightarrow \mathrm{x} \quad \mathrm{y}$
time (in month) $10(9+1)$
9 Ratio of profit 5 : 6
we know
$\frac{10 x y}{9 x y}=\frac{5}{6} \Longleftrightarrow \frac{x}{y}=\frac{3}{4}$
Hence the required ratio of capital of $A$ and $B$ is $=3: 4$
41. (b) Total cost of thing a car $=$ Rs. 4,160

According to the question,
A B C
$\begin{array}{llll}\text { Time of using car } & 7 & 8 & 11\end{array}$
in hours
Here the ratio of time will be the ratio of rent each person has to pay
$\Longrightarrow$ ratio of rents 7 : $8: 11$ to be paid
Rent share by $\mathrm{A}=4160 \times 7 / 7+8+11=$ Rs. 1120
42. (c) Let Total profit $=16$ units

According to the question,
Profit share of $A=3 / 16 \times 16$ units $=3$ units
profit share of $B=1 / 4 \times 16=4$ units
then profit share of $C=[16-(4+3)]=9$ units
But profit of $\mathrm{C}=$ Rs. 243 [given]
9 units = Rs. 243
1 units = Rs. 27
profit share of $B=4$ units
$=27 \times 4=$ Rs. 108
43. (c) Total profit $=$ Rs. 880

Since A gets 15 \% of total profit for management
$\therefore$ Remaining profit $=880-880 \times 15 / 100=$ Rs. 748

|  | A | B |
| :--- | :---: | :---: |
| Amounts | 5,000 | 6,000 |
| Ratio of Capital | 5 | $:$ |

The remaining profit is being divided in the ratio of capital
A's share of profit $=748 / 5+6 \times 5=$ Rs. 340
Total profit received by A $=340+132=$ Rs. 472
44. (b)

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

Let total time for investment $=12$ units Now, According to the question,


12

Ratio of profits
Total Profits $=5+2+28=35$ units
also, total profit = Rs. 1820 (Given)
35 units = Rs. 1820
1 unit = $\underline{1820}=$ Rs. 52

## 35

Hence A's share in profit $=5$ units $=52 \times 5=$ Rs. 260
46. (c) Let ratio of profit of $A$ and $B$ is a : $b$
$\therefore$ Ratio of profit of B and $\mathrm{C}=\mathrm{a}: \mathrm{b}$
A : B
$a_{x b}: b_{x b}$

Note : Value of $B$ would be same in both cases
A
$\begin{array}{cll}B & : & C \\ a b & : & b^{2}\end{array}$
According to the question,
$a^{2}=6400$
$a=80$
Similarly $b^{2}=10,000$
$\Rightarrow b=100$
Amounts received by B
$=a b=80 \times 100$
$=$ Rs. 8,000
47. (d) $A$ : B

Capital 20,000 : 4,000
5 : 1
A's salary = Rs. 1,200
Remaining profit
$=(1800-1200)=$ Rs. 600
6 units = Rs. 600
1 units = Rs. 100
share of $A=100 \times 5=500$
share of $B=100 \times 5=500$
$\therefore$ Total share of $A=(1200+500)=$ Rs. 1700
Total share of $B=$ Rs. 100
According to the question
48. (a) Let the total share
= 100 units
Share of $C=100 / 4=25$ units
Remaining share $=(100-25)=75$ units
$\therefore$ Share of $A=75 / 3+2 \times 3=45$ units
Share of $B=75 / 3+2 \times 2=30$ units

$$
A: B: C
$$

New profit sharing ratio $=45: 30: 25$
Required Ratio $=9: 6: 5$
49. (b) Let the total share $=200$ units
$\therefore$ Share of $C=200 \times 1 / 4=50$ units
Remaining share $=(200-50)=150$ units
$\therefore$ share of $A=200 / 3+2 \times 3=120$ units
share of $B=200 / 3+2 \times 2=80$ units
According to the question,
$C$ receives equal amounts from $A$ and $B$
$\therefore$ A's remaining share $=(120-25)=95$
B's remaining share $=(80-25)=55$

New ratio $\rightarrow$| $A$ | $:$ | $B$ | $:$ |
| :---: | :---: | :---: | :---: |
| $95:$ | 55 | $:$ | 50 |
| $19:$ | 11 | $:$ | 10 |

50. (d) $A$ : B : C

Ratio of profit $\rightarrow 2$ : $3: 7$
Average gain $=\underline{2+3+7}=4$ units
According to the question ,
4 units = Rs. 8000
1 unit = Rs. 2000
3 units $=3 \times 2000=$ Rs. 6000
share of $B=$ Rs. 6000
51. (a)

| (a) | A | $:$ | $B$ | $:$ |
| :--- | :--- | :--- | :--- | :--- |
| Profit | $\frac{1}{4}$ | $:$ | $\frac{1}{6}$ | $:$ |

$3_{\mathrm{x} 9} \quad \mathbf{2}_{\mathrm{x} 9} \quad 7_{\mathrm{x} 9}$
Note : To avoid fraction in calculation multiply
all the ratio by 9
After that new Ratio of profits
A : B : C
profit $\rightarrow 27$ : 18 : 63
New profit of $A=27+63 / 5+4 \times 4=55$
New profit of $B=18+63 / 4+5 \times 5=53$
$\therefore$ New profit sharing ratio of $A$ and $B=55$ :
53
52. (a)


According to the question,
$(9+7+6)$ units = Rs. 396
22 units = Rs. 396
1 unit =Rs. 396/22 = Rs. 18
$\therefore$ Share of $A=18 \times 9=$ Rs. 162
53. (b) Total capital of $A$ invested in 1 year
$=48,000 \times 3+40,000 \times 9$
$=1,44,000+3,60,000=$ Rs. 5,04,000
Total capital of $B$ invested in 1 year
$=60,000 \times 6+6,60,000 \times 6$
=Rs. 7,56,000

|  | A | $:$ | B |
| :--- | :---: | :--- | :---: |
| Capital $\rightarrow$ | $5,04,000$ | $:$ | $7,56,000$ |
| Profit $\rightarrow$ | 2 | $:$ | 3 |


| $\times 6000$ | $\times 6000$ |
| :---: | :---: |
| Total profit $=(2+3) \times 6000=30,000$ |  |

54. (a) $0 \quad \mathrm{P} \quad \mathrm{Q}$

M's extra share on working partner
$=7400 \times 5 / 100=$ Rs. 370
Remaining profit $=$ Rs. $7400-370=$ Rs. 7030
According to the question,
$(13+14+10)$ units $=$ Rs. 7030
37 units = Rs. 7030
1 units = Rs. 7030/37
Profit of $\mathbb{Q}=10$ units $=$ Rs. $7030 / 37 \times 10=$ Rs.
1900
55. 



According to the question,
$(10+9+8)$ units $=$ Rs. 10,800
27 units = Rs. 10,840
1 unit = Rs. 400
Difference between A's share and C's share $=(10-8) \times 400=$ Rs. 800
56.

$\therefore$ Required ratio of profit $=8: 9: 10$
57.

| (b) | A | $:$ | B $\quad:$ |  | C |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Capital $\rightarrow$ | 45,000 | $:$ | 80,000 | $:$ |  |
| $1,20,000$ |  |  |  |  |  |
| (year) Time $\rightarrow$ <br> 1 | 2 | $:$ | $\underline{3}$ |  |  |
| Profit $\rightarrow$ <br> 120 | 90 | $:$ | 120 | $:$ |  |


| 3 |  |  |  |  | $:$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 4 |  |  |  |  |  |
| Required Ratio profit $=3: 4: 4$ |  |  |  |  |  |
| (c) | A | $:$ | B | $:$ | C |
| Capital $\rightarrow$ | 48000 | $:$ | 48000 | $:$ | 48000 |
| Time $\rightarrow$ | 6 | $:$ | 10 | $:$ | 12 |
| Profit $\rightarrow$ | 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 = Rs. 5250
14 units = Rs. 375
$\therefore$ Share of $A=375 \times 3=$ Rs. 1125
Share of $B=375 \times 6=$ Rs. 2250
59. (b) A : B : C

Capital $\rightarrow 60,000: 80,000: 1,20,000$
Time $\rightarrow \quad 4 \quad: \quad 9 \quad: \quad 12$
Profit $\rightarrow$ 2,40,000 : 7,20,000 : 14,40,000
1 : 3 : 6
According to the question,
$(1+3+6)$ units $=$ Rs. $1,60,480$
10 units = Rs. 1,60,480
1 unit = Rs. 16,480
Share of $A=16,048 \times 1=16,048$
Share of $B=16,048 \times 3=48,144$
Share of $A=16,048 \times 6=96,228$
60. (a) Let the amount invested by $A=$ Rs. $X$

Now, According to the question ,
A : B
Capital $\rightarrow x:(x+15000):(x+35000)$
$x+x+15000+x+35000=$ Rs. $1,25,000$
$3 x=125000-50000$
$3 x=75000$
x = Rs. 25000
$\therefore$ Amount invested by $B=$ Rs. 40,000
Amounts invested by $C=$ Rs. 60,000
$\begin{array}{lccccc} & \text { A } & : & \text { B } & : & \text { C } \\ \text { Capital } \rightarrow & 25,000 & : & 40,000 & : & 60,000 \\ \text { Profit } \rightarrow & 5 & : & 8 & : & 12\end{array}$
$(5+8+12)$ units $=$ Rs. 37450
25 units = Rs. 37450
1 unit = Rs. 1498
$\therefore$ Share of $A=1498 \times 5=$ Rs. 7490
Share of $B=1498 \times 8=$ Rs. 11984
Share of $C=1498 \times 12=$ Rs. 17976
61. (b) Capital invested by $\mathrm{A}=$ Rs. 42,000

Capital invested by A = Rs. 49,000
Ratio of profits of $B$ and $A=900: 700=9$
: 7

$\underline{42,000 \times 12}=\underline{9}$
$49,000 \times$ T2 7
T2 $=8$ months
It means B invested his capital for 8 months. It means he joined business after $(12-8=4)$ months
62. (d) Let amount invested by $A=R s . X$

A
Capital $\rightarrow \quad x \quad: \quad(x+5000)$
According to the question,
Share of A in profit $=\underline{(26000-6000)}=10,000$ 2
Share of B in profit $=(26,000-10,000)=$ Rs. 16,000
By using formulas

$\frac{x \times 5}{(x+5000)}=\frac{10,000}{16,000}$
$4 x=3 x+15,000$
$x=15,000$

Required capital of $A=$ Rs. 15,000
Required capital of $B=$ Rs. $(15,000+5,000)=$ 20,000
63. (c) Ratio of Capital invested by $\mathrm{A}, \mathrm{B}$ and $\mathrm{C}=15$ : 10:6
Total Capital invested by A in 1 year $=15 x \times 4+$ $30 \mathrm{x} \times 8=300 \mathrm{x}$
Total capital invested by $B$ in 1 year $=10 x \times 6+$ $5 x \times 6=90 x$
Total capital invested by C in 1 year $=6 x \times 12=$ 72x
Ratio of profits
A: B: C
300 x : 90 x : 72x
$50 x$ : $15 x$ : 12x
According to the question,
$(50 x+15 x+12 x)=$ Rs. 34,650
$77 \mathrm{x}=$ Rs. 34,650
$x=$ Rs. $34,650 / 77=$ Rs. 450
Profit of $A=$ Rs. $450 \times 50=$ Rs. 22,500

Profit of $B=$ Rs. $450 \times 15=$ Rs. 6,750
Profit of $C=$ Rs. $450 \times 12=$ Rs. 5,400
64. (d) Total capital invested by A in 1 year
$=36,000 \times 12=4,32,000$
Total capital invested by B in 1 year
$=45,000 \times 4(45,000-20,000) \times 5+(55,000+$ $25,000) \times 3$
$=1,80,000+1,25,000+2,40,000$
$=5,45,000$

$$
\mathrm{A} \quad: \quad \mathrm{B}
$$

Ratio of capital $\rightarrow 432000$ : 545000
Ratio of profit $\rightarrow 432$ : 545
According to the question,
$(432+545)$ units = Rs. 117240
977 units = Rs. 117240
1 unit = 117240/977=Rs. 120
Difference in profit $=(545-432) \times 120=13560$
It means $B$ will get Rs. 13,560 more
than A .
65. (b) A : B : C

Capital $\rightarrow$ 24,000 : 32,000 : 18000

Let the total profit $=100 x$
Extra share of $A=100 x \times 15 / 100=15 x$
Extra share of $B=100 x \times 12 / 100=12 x$
Remaining profit $=[100 x-(15 x+12 x)=73 x$
According to the question,
Note : Remaining profit is distributed in the ratio of their capitals
$\therefore \quad$ Share of C
$=\frac{73 x}{(12+16+9)} \times 9=\frac{657 x}{37}$
$657 x=$ Rs. 65700
37
$x=$ Rs. $\underline{65700 \times 37}$ 637
$\therefore$ Hence required profit $=100$
$=100 \times 3700=$ Rs. 3,70,000

| 66. | (c) | A | B | C |
| :---: | :---: | :---: | :---: | :---: |
|  | Ratio of cow | 12 | : 16 | : 6 |
|  | Time | $4 \times 2$ | $4 \times 6$ | $9 \times 2$ |
|  | Ratio of Rent | 96 | 384 | 108 |
|  |  | $8 \times 36$ | $: 32$ | : ${ }^{1} \times 36$ |
|  |  | 288 |  | 324 |

Total rent $(288+1152+324)=$ Rs. 1764
67. (a) $A$ : B : C Capital $\rightarrow 500: 400: 800$
Time $\rightarrow \quad 12: 10 \quad: \quad 6$
Profit $\rightarrow$ 6,000 : 4,000 : 4,800
15 : 10 :
According to the question,
$(15+10+12)$ units $=$ Rs. 444
37 units = Rs. 444
1 units $=444 / 37=$ Rs, 12
Profit of $A=12 \times 15=$ Rs. 180
Profit of $B=10 \times 12=$ Rs. 120
Profit of $C=12 \times 12=$ Rs. 144
68. (d) B's profit share in 1 year $=12 \times 100=$ Rs. 1200
Interest of $A=\underline{10,000 \times 5 \times 1}$
100
Rs. 500
Interest of $B=\underline{4000 \times 5 \times 1}=$ Rs. 200 100
Total profit of $A$ and $B=(1200+500+200)=$ Rs. 1900
Remaining profit
$=(4000-1900)=2100$
Note: Remaining profit will be divided in the ratio of their profit.
According to the question

|  | A | $:$ | B |
| :---: | :---: | :---: | :---: |
| Capital | 10000 | $:$ | 4000 |
|  | 5 | $:$ | 2 |

Share of $A$ in remaining profit $=\underline{2100} \times 5=$ Rs. 1500

Share of $B$ in remaining profit $=m \underline{2100} \times 2$

Total profit of $A=500+1500=$ Rs. 2000
Total profit of $B=1200+600+200=$ Rs. 2100
69. (a) Total capital invested by $A$ in 1 year $=12 \times 4000=$ Rs. 48000
Total capital invested by B in 1 year
$=6000 \times 4+8000 \times 8=24000+64000=$ Rs.
88000
Total capital invested by C in 1 year
$=8000 \times 9+3 \times 6000$
$=72000+18000=90000$
A : B

Capital $\rightarrow \begin{array}{ccccl}48000 & : & 88000 & : & 90000 \\ 24 & : & 44 & : & 45\end{array}$
According to the question ,
$(22+44+45)$ units $=$ Rs. 16950
113 units = 16950
1 units = Rs. $16950 / 113$ = Rs. 150
Hence,
Profit of $A=150 \times 24=$ Rs. 3600
Profit of $B=150 \times 44=$ Rs. 6600
Profit of $C=150 \times 45=$ Rs. 6750
70. (d) $A$ : $B: C=1 / 4: 1 / 3: 1 / 6$

Ratio of shares of $A, B$ and $C$

$$
A: B: C
$$

Capita $\rightarrow 3 x: 4 x: 2 x$
Total capital invested by A in 1 year
$=3 x \times 4+5 x \times 8=24 x$
Total capital invested by B in 1 year
$=4 x++5 x / 3 \times 6=32 x$
Total capital invested by C in 1 year
$=2 x \times 12=24 x$
A : B : C
Capital $\rightarrow$ 24x : 32x : 24x
$3 x: 4 x$ : $3 x$
According to the question ,
$(3 x+4 x+3 x)=14000$
$10 x=14000$
x = 1400
Hence, Profit of $A=1400 \times 3=$ Rs. 4200
Profit of $B=1400 \times 4=$ Rs. 5600
Profit of $C=1400 \times 3=$ Rs. 4200
71. (b)

Capital $\rightarrow 25 \mathrm{x}: 16 \mathrm{x}: 24 \mathrm{x}$
Total capital of $A$ in 1 year
$=25 x \times 3+(37.5 x) \times 9$
$=75 \mathrm{x}+337.5 \mathrm{x}=412.5 \mathrm{x}$
Total capital of B in 1 year
$=16 \mathrm{x} \times 12=192 \mathrm{x}$
Total capital of $C$ in 1 year
$=24 \times 12 x=288 x$
Capital $\rightarrow 412.5 x \quad: \begin{array}{cl}A & : \\ \text { A } & : \\ \text { A }\end{array}$
According to the question,
$(412.5 x+192 x+288 x)=35700$
$=35700 / 892.5=$ Rs. 40
Hence, Share of $A=412.5 \times 40=$ Rs. 16500
72. (c) Total profit $=$ Rs. 4000

According to the question,
$20 \%$ of B's capital $=$ Rs. 4000
$1 \%$ of B's capital $=4000 / 20$
B's total capital $=4000 / 20 \times 100=$ Rs. 20,000
Let total capital required for business $=100$
units
$\left.\begin{array}{ccccc}\text { A } & : & \text { B } & : & C \\ \text { Capital } \rightarrow 30 & : & 40 & : & 30 \\ \times 500\end{array}\right)$

Hence, required capital for $C=$ Rs. 15000
73. (a) Note : In such type of question we can assume ratio as per our need to avoid fraction.
Capital $\rightarrow \quad$ A : B
New ratio $\rightarrow \quad \begin{array}{ccc}7_{\times 3} & : & 9_{\times 3} \\ A & : & B\end{array}$ 21x : 27x
Total capital invested by $A$ in 9 months
$=21 \mathrm{x} \times 3+7 \mathrm{x} \times 6=105 \mathrm{x}$
Total capital invested by $B$ in 9 months
$=27 \mathrm{x} \times 4+18 \mathrm{x} \times 5=108 \mathrm{x}+90 \mathrm{x}=198 \mathrm{x}$

B
Capital $\rightarrow$ 105x : 198x
According to the question,
( $105 \times 198 \mathrm{x}$ ) = Rs. 10201
303x = Rs. 10201
$x=$ Rs. 10201/303
Hence, share of $A$
$=105 \times 10201 / 303=$ Rs. 3535
Share of $B=198 \times 10201 / 303=$ Rs. 6666
74. (b) Interest for A
$=42000 \times 7 \times 1 / 100=$ Rs. 2940
Interest for B
$=48000 \times 7 \times 1 / 100=$ Rs. 3360
Interest for C
$=32000 \times 7 \times 1 / 100=$ Rs. 2240
Total interest of
$(A+B+C)=(2940+3360+2240)=$ Rs. 8540
Remaining profit $=$ Rs. $(32940-8540)=$ Rs.
24400

| A | $:$ | B | $:$ | $C$ |
| :---: | :--- | :---: | :--- | :---: |
| Capital $\rightarrow 42000$ | $: 48000$ | $:$ | 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
$=400 \times 21=$ Rs. 8400
Share of B in remaining profit
$=400 \times 24=$ Rs. 9600
Share of C in remaining profit
$=400 \times 16=$ Rs. 6400
$\therefore$ Total share of A

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