Goodwill = Average profit × No. of years of purchase

= 1,18,000 × 3

Goodwill = 3,54,000

(3) **Goodwill as per weighted average profit method :**

Statement Showing Computation of Weighted Average Profit

Year	Profit (₹)	Weight	Weighted profit (₹)
(1)	(2)	(3)	(4) (2 × 3)
2012-13	90,000	1	90,000
2013-14	1,10,000	2	2,20,000
2014-15	1,20,000	3	3,60,000
2015-16	1,30,000	4	5,20,000
2016-17	1,40,000	5	7,00,000
	Total	**15**	**18,90,000**

Weighted average profit $= \dfrac{\text{Total weighted profit}}{\text{Total weight}}$

$= \dfrac{18{,}90{,}000}{15}$

Weighted average profit = ₹ 1,26,000

Goodwill = Weighted average profit × No. of years of purchase

= 1,26,000 × 2

Goodwill = 2,52,000

(4) **On the basis of 4 years purchase of super profit :**

Statement Showing Computation of Goodwill

Step No.	Particulars	Amount (₹)
(1)	Capital employed Total assets 10,00,000 − Total external liabilities 2,00,000 Capital employed 8,00,000	8,00,000
(2)	Expected rate of return	10 %
(3)	Expected profit = Capital employed × Expected rate of return = 8,00,000 × 10 % = 80,000	80,000
(4)	Average profit : (Weighted average profit) Note : Here, weighted average profit ₹ 1,26,000 will be calculated as per previous method.	1,26,000
(5)	Super profit = Average profit − Expected profit = 1,26,000 − 80,000 = 46,000	46,000

(6)	Goodwill = Super profit × No. of years of purchase = 46,000 × 4 Goodwill = 1,84,000	1,84,000

(5) Profit capitalisation method :

Statement Showing Computation of Goodwill

Step No.	Particulars	Amount (₹)
(1)	Capital employed Total assets 10,00,000 − Total external liabilities 2,00,000 Capital employed 8,00,000	8,00,000
(2)	Expected rate of return	10 %
(3)	Average profit (Weighted average) (As per previous method)	1,26,000
(4)	Capitalised profit $= \frac{\text{Average profit}}{\text{Expected rate of return}} \times 100$ $= \frac{1,26,000}{10} \times 100 = \mathbf{12,60,000}$	12,60,000
(5)	Goodwill = Capitalised profit − Capital employed = 12,60,000 − 8,00,000 **Goodwill = 4,60,000**	4,60,000

(6) Super profit capitalisation method :

Statement Showing Computation of Goodwill

Step No.	Particulars	Amount (₹)
(1)	Capital employed Total assets 10,00,000 − Total external liabilities 2,00,000 Capital employed 8,00,000	8,00,000
(2)	Expected rate of return	10 %
(3)	Expected profit = Capital employed × Expected rate of return = 8,00,000 × 10 % = 80,000	80,000
(4)	Average profit (Weighted average) (As per previous method)	1,26,000
(5)	Super profit = Average profit − Expected profit = 1,26,000 − 80,000 = 46,000	46,000
(6)	Goodwill $= \frac{\text{Super profit}}{\text{Expected rate of return}} \times 100 = \frac{46,000}{10} \times 100$ Goodwill = 4,60,000	4,60,000

Note : (1) Value of goodwill is zero where super profit is zero or negative (−), it means no existence of goodwill. (2) If there is loss in business, then there is no existence of goodwill.

EXERCISE

1. Select the correct answer for each question :

(1) 'Goodwill' is which type of asset ?

(a) Tangible asset (b) Intangible asset

(b) Current asset (d) Fictitious asset

(2) Goodwill depends on which aspect ?

(a) On employee of business enterprise

(b) On management of business enterprise

(c) On assets of business enterprise

(d) On future maintainable profit

(3) Goodwill is a financial value of ....

(a) investment (b) prestige of business enterprise

(c) fixed assets (d) competition

(4) Goodwill is .... where individual skill is important.

(a) more (b) less

(c) zero (d) negative

(5) Which method is appropriate for the computation of goodwill when every year profit is increasing ?

(a) Simple average (b) Weighted average

(c) Annual growth rate (d) Compound growth rate

(6) Expected profit = ...

(a) Capital employed × Expected rate of return

(b) Average profit × Expected rate of return

(c) Weighted average profit × Expected rate of return

(d) Assets × Expected rate of return

(7) Super profit means ....

(a) Capital employed – Expected profit (b) Expected profit – Capital employed

(c) Average profit – Expected profit (d) Expected profit – Average profit

2. **Answer the following questions in one sentence :**

(1) What is goodwill ?

(2) What is revaluation of goodwill ?

(3) Which type of asset is 'goodwill' ?

(4) Under which head goodwill is shown in the balance sheet ?

(5) What is capitalised profit ?

(6) What is super profit ?

(7) What is average profit ?

(8) What is weighted average profit ?

3. **Answer the following questions :**

(1) Give the meaning of goodwill and explain the factors affecting to its valuation.

(2) Explain the nature of goodwill.

(3) Explain the simple average method for the valuation of goodwill.

(4) Explain the weighted average method for the valuation of goodwill.

(5) Explain the super profit method for the valuation of goodwill.

(6) Explain the profit capitalisation method for the valuation of goodwill.

4. From the following information of Bhavesh and Vipul's firm, compute the value of goodwill on the basis of 4 years purchase of last five years average profit. Information of last five years profit is as under :

Year	Profit (₹)
2011-12	1,00,000
2012-13	1,10,000
2013-14	1,80,000
2014-15	2,00,000
2015-16	1,50,000

5. Mahendra and Pravin are partners of a firm sharing profit and loss in the ratio of 3:2. They want to change their profit-loss sharing ratio to 1:1. Therefore, they decided to make valuation of goodwill. As per partnership agreement, value of goodwill to be determine on the basis of 5 years purchase of last 4 years average profit.

Year	Profit (₹)
2013-14	60,000
2014-15	80,000
2015-16	(20,000)
2016-17	30,000

6. From the following information find out weighted average profit :

Year	Profit (₹)
2013-14	60,000
2014-15	70,000
2015-16	90,000
2016-17	1,10,000

7. From the following information of Babulal and Kantilal's firm, determine the value of goodwill on the basis of 3 years purchase of last five years weighted average profit :

Year	Profit (₹)
2012-13	40,000
2013-14	60,000
2014-15	75,000
2015-16	90,000
2016-17	1,20,000

8. Pushpa, Pratibha and Bhavna are partners of a partnership firm. They decided to change their profit-loss sharing ratio from 3:2:1 to 1:1:1. Therefore they decided to make the valuation of goodwill. On the basis of partnership firm's profit and other information, determine the value of goodwill on the basis of three years purchase of super profit.

Assets : ₹ 6,00,000; Liabilities : ₹ 2,50,000; Expected rate of return : 10 %

Actual profit :

Year	Profit (₹)
2014-15	80,000
2015-16	70,000
2016-17	90,000

9. Capital of Meena and Manju's firm is ₹ 4,00,000 and expected rate of return is 10 %. Last three year's profits are ₹ 1,20,000, ₹ 1,10,000 and ₹ 1,00,000 respectively. Compute the value of goodwill two times of super profit on the basis weighted average method..

10. From the following information of Nairutva and Rutvik's firm determine the value of goodwill of partnership firm on the basis of capitalisation of weighted average profit method.

Year	Profit (₹)
2012-13	45,000
2013-14	50,000
2014-15	65,000
2015-16	75,000
2016-17	90,000

Additional information :

(1) Business assets : ₹ 6,00,000 (2) Business liabilities : ₹ 1,70,000

(3) Normal expected return of business is 10 %.

11. Determine the value of goodwill of Prabha and Prabhu's firm on the basis of capitalised super profit method.

(1) Capital employed : ₹ 9,00,000 (2) Expected rate of return : 12 %

(3) Last five years profit :

Year	Profit (₹)
2012-13	1,00,000
2013-14	1,40,000
2014-15	1,30,000
2015-16	1,50,000
2016-17	1,80,000

12. Rajesh and Harish are partners of a partnership firm. On the basis of their partnership firm's profit and other information, determine the value of goodwill on the basis of two years purchase of super profit.

(1) Capital employed : ₹ 8,00,000 (2) Expected rate of return : 12 %

(3) Previous years profit :

Year	Profit (₹)
2014-15	1,20,000
2015-16	90,000
2016-17	1,50,000

4

Reconstruction of Partnership

1. Introduction

We have studied about the nature of a partnership firm and its final accounts in the previous chapter. In this chapter we will study about the "Reconstruction (Reconstitution) of partnership". i.e. Changes in partnership due to several reasons.

Reasons for changes in partnership : Following are three reasons for the changes in a partnership.

Reasons for changes in a partnership

↓ The change in the ratio of profit and loss sharing between the continuing partners

↓ Admission of existing partnership firm

↓ Retirement or death of a partner of an existing partnership firm

In this chapter, we will discuss in detail about the change in profit and loss sharing ratio or distribution ratio between the existing partners. The detailed discussion on the admission of a new partner and the retirement or death of a partner has been made in the next chapter.

2. The Changes in Profit and Loss Sharing or Distributing Ratio Between the Continuing (Present) Partners

Generally, profit and loss sharing ratio between the partners in a partnership is not changed once it is agreed. e.g. profit and loss sharing ratio between A and B is 3:2. Generally this ratio is not changed. But if it is required, then it can be changed with the consent of all existing partners.

There may be following reasons for the change in profit and loss distribution ratio :

(1) When a partner in charge of the firm is not able to manage the firm on the grounds of illness or incapability or some personal reasons.

(2) When a partner can not devote enough time to run a business, the other partner has to substitute him and run the business.

(3) Due to retirement or death of a partner.

(4) Due to new partners' admission.

Explanation or Understanding with Illustration : Let us understand the above information (particulars) with an illustration.

Virat and Vaman are the partners in a firm sharing profit and loss in proportion of 1:1. Due to his illness, Vaman is not able to spare enough time for business. Therefore, they have decided to share the profit and loss in the ratio of 2:1.

After making changes in the profit and loss sharing ratio Virat will get $\frac{2}{3}$ part of the profit and Vaman will get $\frac{1}{3}$.

Prior to the above distribution, both used to get $\frac{1}{2}$ part of profit. From this we can say that the portion of share of profit for Virat is increased and that of Vaman is decreased. The same can be shown by the following calculation :

Changes in profit share = Old share − New share

In the above formula if the answer is '+' (positive) then it is called decrease in profit (sacrifice) sharing and if the answer is '−' (negative) then it is called increase in profit sharing (gain).

Changes in profit received by Virat = Old share − New share

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

$$= \frac{3-4}{6}$$

$$= -\frac{1}{6}$$

Increase in profit ratio received by Virat = $-\frac{1}{6}$ (Gain)(As per above explanation)

Changes in profit received by Vaman = Old share − New share

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

$$= \frac{3-2}{6}$$

$$= \frac{1}{6}$$

Decrease in profit ratio received by Vaman = $\frac{1}{6}$ (Sacrifice)(As per above explanation)

From the above calculation, it can be seen that the share of profit of Virat is increased by $\frac{1}{6}$ and Vaman lost the share of profit by $\frac{1}{6}$. i.e. $\frac{1}{6}$ share of profit, which is lost by Vaman, is gained by Virat. In this way, the increase in the share of profit of Virat is called 'gain' and decrease in the share of profit of Vaman is called 'sacrifice'. In this example Vaman's 'sacrifice' turns out to be 'gain' for Virat.

Generally, when there is a change in profit sharing ratio of the existing partner, then some partners have to sacrifice certain portion of their profit which will be the gain for the other partner. So at the time of the reconstruction of a partnership, two important points are to be noted :

(1) Sacrificing ratio (2) Gaining ratio

(1) Sacrificing Ratio :

When there is a change in the ratio of profit and loss sharing of existing partners, a portion of profit of certain partners is reduced. i.e. they get less share as compared to what they used to get before. This reduced share of profit of a partners is called "Sacrificing ratio".

In case of admission of a new partner in an existing partnership firm, old partners have to give certain share of profit in favour of the new partner. At that time, it is also required to calculate sacrificing ratio of old partners. The detailed discussion of admission of a new partner will be made in Chapter no. 5.

Sacrificing ratio depends on the changes in the old profit and loss sharing ratio of the parnters. In the existing partnership firm, sacrificing ratio is a difference between the old share and the new share of profit of one or more partners who have, sacrificed. As per the mathematical method,

Sacrificing ratio of a partner = Old share − New share

From the above formula we can say that if a partners' old share of profit is higher than the new share, it means that the partner has sacrified his share. Let us try to understand the sacrifice made by a partner through the following example.

- **When sacrifice is done by one partner :**

Illustration 1 : Ram, Shyam and Ghanshyam are the partners in a firm sharing profit and loss equally. They decided to share profit and loss in the ratio of 3:2:1 in future. In these circumstances, calculate which partner has sacrified and how much ?

Ans. :

	Ram		**Shyam**		**Ghanshyam**	**Total**
Old ratio	1	:	1	:	1	3
Old share	$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$	
New ratio	3	:	2	:	1	6
New share	$\frac{3}{6}$		$\frac{2}{6}$		$\frac{1}{6}$	

Now let's calculate sacrifice ratio by partners.

Sacrifice by partner = Old share − New share

(1) Ram's sacrifice $= \frac{1}{3} - \frac{3}{6}$

$= \frac{2-3}{6}$

Ram's sacrifice $= \frac{-1}{6}$ (Gain)

Here, $\frac{-1}{6}$ share in sacrifice formula, it means Ram is gaining $\frac{1}{6}$ shares.

(2) Shyam's sacrifice $= \frac{1}{3} - \frac{2}{6}$

$= \frac{2-2}{6}$

$= \frac{0}{6}$

Shyam's sacrifice $= 0$ (No gain, no sacrifice)

From the above calculation sacrifice ratio of Shyam = 0. i.e. Shyam has sacrificed nothing, as his share of profit remains the same.

Old ratio $= \frac{1}{3}$

New ratio $= \frac{2}{6} = \frac{1}{3}$

(3) Ghanshyam's sacrifice $= \frac{1}{3} - \frac{1}{6}$

$= \frac{2-1}{6}$

Ghanshyam's sacrifice $= \frac{1}{6}$ (Sacrifice)

From the above illustration, the benefit to Ram of $\frac{1}{6}$ share is due to the sacrifice given by Ghanshyam of $\frac{1}{6}$ share.

From the above illustration we can say that while calculating the sacrificing ratio, if the answer is negative (−), then it is benefit to the partner and not sacrifice. i.e. Gain ratio = New profit sharing ratio − Old profit sharing ratio

Ram	Shyam	Ghanshyam	
$-\frac{1}{6}$	0	$\frac{1}{6}$	0
(Gain)		(Sacrifice)	

Note : Total of sacrifice share and total of gain share is always equal.

- **When more than one partner is sacrificing :**

Illustration 2 : Bhavesh, Vipul and Hiral are the partners in a firm sharing profit and loss in the ratio of 2:2:1. They decided to share profits and losses in the ratio of 3:2:1 in future. From this information, calculate the sacrificing ratio.

Ans. :

	Bhavesh		**Vipul**		**Hiral**	**Total**
Old ratio	2	:	2	:	1	5
Old share	$\frac{2}{5}$		$\frac{2}{5}$		$\frac{1}{5}$	
New ratio	3	:	2	:	1	6
New share	$\frac{3}{6}$		$\frac{2}{6}$		$\frac{1}{6}$	

Share of sacrifice = Old share − New share

(1) Bhavesh's sacrifice $= \frac{2}{5} - \frac{3}{6}$

$= \frac{12-15}{30}$

$= \frac{-3}{30}$

Bhavesh's sacrifice $= \frac{-1}{10}$ (Gain)

(2) Vipul's sacrifice $= \frac{2}{5} - \frac{2}{6}$

$= \frac{12-10}{30}$

Vipul's sacrifice $= \frac{2}{30}$ (Sacrifice)

(3) Hiral's sacrifice $= \frac{1}{5} - \frac{1}{6}$

$= \frac{6-5}{30}$

Hiral's sacrifice $= \frac{1}{30}$ (Sacrifice)

From the above calculation it can be seen that the sacrifice by Vipul and Hiral is received by Bhavesh in the form of gain / benefit. Vipul sacrificed $\frac{2}{30}$ and Hiral sacrificed $\frac{1}{30}$. So sacrifice ratio between Vipul and Hiral is $\frac{2}{30}$: $\frac{1}{30}$ respectively. i.e. sacrificing ratio of Vipul and Bhavesh is 2:1.

As per the earlier discussion, some partners' sacrifice turns out to be a benefit for the other partners'. In the above illustration sacrifice by Vipul and Hiral become a gain for Bhavesh. The calculation is as under :

Vipul's sacrifice $= \frac{2}{30}$

Hiral's sacrifice $= \frac{1}{30}$

$\therefore$ Vipul and Hiral's total sacrifice $= \frac{2}{30} + \frac{1}{30}$

$= \frac{2+1}{30}$

$= \frac{3}{30}$

Vipul and Hiral's total sacrifice $= \frac{1}{10}$

Bhavesh's gain $= \frac{1}{10}$

So, from the above calculation, it can be seen that the benefit of $\frac{1}{10}$ received by Bhavesh, is in the ratio of 2:1 from Vipul and Hiral respectively.

- **Sacrifice by one partner and gain by more than one partners :**

Illustration 3 : Poonam, Dhaval and Komal are the partners in a firm. Their profit and loss sharing ratio is 3:2:1. All the partners have decided to change the profit and loss ratio and it is 1:2:2. Calculate the sacrificing ratio of partners.

Ans. :

	Poonam		**Dhaval**		**Komal**	**Total**
Old ratio	3	:	2	:	1	6
Old share	$\frac{3}{6}$		$\frac{2}{6}$		$\frac{1}{6}$	
New ratio	1	:	2	:	2	5
New share	$\frac{1}{5}$		$\frac{2}{5}$		$\frac{2}{5}$	

The calculation of sacrifice by the partner :

Sacrifice = Old share − New share

(1) Poonam's sacrifice = Old share − New share

$$= \frac{3}{6} - \frac{1}{5}$$

$$= \frac{15-6}{30}$$

Poonam's sacrifice = $\frac{9}{30}$

(2) Dhaval's sacrifice = Old share − New share

$$= \frac{2}{6} - \frac{2}{5}$$

$$= \frac{10-12}{30}$$

Dhaval's sacrifice = $\frac{-2}{30}$ (Gain)

(3) Komal's sacrifice = Old share − New share

$$= \frac{1}{6} - \frac{2}{5}$$

$$= \frac{5-12}{30}$$

Komal's sacrifice = $\frac{-7}{30}$ (Gain)

As per the above calculation answers of Dhaval and Komal are negative (−). i.e. Dhaval and Komal have sacrificied nothing, but they received benefit of $\frac{2}{30}$ and $\frac{7}{30}$.

The benefit by Dhaval and Komal is due to Poonam's sacrifice. The calculation is as under :

Poonam's sacrifice = $\frac{9}{30}$

Dhaval's gain = $\frac{2}{30}$

Komal's gain = $\frac{7}{30}$

∴ Dhaval and Komal's gain = $\frac{2}{30} + \frac{7}{30} = \frac{9}{30}$

Here, the sacrifice of $\frac{9}{30}$ by Poonam, is equal to the total benefit of Dhaval and Komal.

Dhaval and Komal received the benefit of $\frac{2}{30}$ and $\frac{7}{30}$ respectively. i.e. the gain ratio between Dhaval and Komal is 2:7 which is received from Pooman.

Now, we try to understand the calculation of the gain ratio.

(2) **Gaining Ratio :**

When there is a change in profit and loss sharing ratio of partners, share of profit of some partners reduces and other partners share of profit increases. So some partners' share of profit is higher than the prior one. The higher share of profit of partners is called 'gaining ratio'.

If any partner retired or if there is death of any partner in the existing firm, share of profit of the retired or deceased partner will be received by the existing partners. At that time also, it becomes necessary to calculate the gaining ratio. The detailed discussion of retirement or death of an existing partner will be made in chapter 6.

If the new profit-loss sharing ratio is more compared to the old profit-loss sharing ratio then it is called gain. Gaining ratio is a difference between new profit-loss sharing ratio and old profit-loss sharing ratio received by the partners. As per the mathematical method,

Gain = New share − Old share

Let us try to understand the gaining ratio of partners with an illustration.

- **When any one partner is gaining :**

Illustration 4 : Dhruvil, Gopi and Mukund are partners the in a partnership firm. Their profit and loss sharing ratio is 1:1:1. All partners have decided to change the profit and loss sharing ratio in future to 1:2:3. Calculate the gain ratio.

Ans. :

	Dhuvil		**Gopi**		**Mukund**	**Total**
Old ratio	1	:	1	:	1	3
Old share	$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$	
New ratio	1	:	2	:	3	6
New share	$\frac{1}{6}$		$\frac{2}{6}$		$\frac{3}{6}$	

Now, let's calculate the gaining ratio of the partners.

Partner's gain = New share − Old share

(1) Dhruvil's gain $= \frac{1}{6} - \frac{1}{3}$

$= \frac{1-2}{6}$

Dhruvil's gain $= \frac{-1}{6}$ (Sacrifice)

(2) Gopi's gain $= \frac{2}{6} - \frac{1}{3}$

$= \frac{2-2}{6}$

$= \frac{0}{6}$

Gopi's gain $= 0$ (Zero)

(3) Mukund's gain $= \frac{3}{6} - \frac{1}{3}$

$= \frac{3-2}{6}$

Mukund's gain $= \frac{1}{6}$

As per the above calculation of gain, Dhruvil's gain answer is negative $(-)$ which shows that actually Dhruvil does not receive any benefit but he has to sacrifice his share because of the change in profit and loss sharing ratio. Gopi has neither sacrificed nor gained due to the change in profit and loss sharing ratio as there is no change in her profit and loss sharing ratio. Her new profit-loss sharing ratio $\frac{2}{6} = \frac{1}{3}$ and her old ratio is also $\frac{1}{3}$. Actually, gain by Mukund is due to Dhruvil's sacrifice.

From the above illustration, it can be seen that while calculating the gain ratio if the answer is negative $(-)$ then it is a sacrifice and not a gain.

- **When more than one partner are gaining :**

Illustration 5 : Dhyey, Siddhi and Prapti are the partners in a firm sharing profits and losses in the ratio of 1:1:1. All partners have decided to share profit and loss in the new ratio of 1:3:3. From the above information, find out the gain ratio.

Ans. :

	Dhyey		**Siddhi**		**Prapti**	**Total**
Old ratio	1	:	1	:	1	3
Old share	$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$	
New ratio	1	:	3	:	3	7
New share	$\frac{1}{7}$		$\frac{3}{7}$		$\frac{3}{7}$	

Gain = New share − Old share

(1) Gain to Dhyey $= \frac{1}{7} - \frac{1}{3}$

$= \frac{3-7}{21}$

Gain to Dhyey $= \frac{-4}{21}$ (Sacrifice)

(2) Gain to Siddhi $= \frac{3}{7} - \frac{1}{3}$

$= \frac{9-7}{21}$

Gain to Siddhi $= \frac{2}{21}$

(3) Gain to Prapti $= \frac{3}{7} - \frac{1}{3}$

$= \frac{9-7}{21}$

Gain to Prapti $= \frac{2}{21}$

As per the above calculation, while calculating the gain to Dhyey, answer is negative $(-)$, so Dhyey is not gaining anything but he has sacrificed $\frac{4}{21}$ share of profit. Gain to Siddhi and Prapti is $\frac{2}{21}$ and $\frac{2}{21}$ respectively.

So, gain ratio between Siddhi and Prapti is $\frac{2}{21} : \frac{2}{21}$ i.e. 1:1 (2:2).

- **When more than one partner scrifices and gain is to any one partner :**

Illustration 6 : Sagar, Sarita and Palak are the partners in a firm sharing profits and losses in the ratio of 3:3:2. All partners have decided to change their profit and loss ratio to 1:1:1. Calculate gain and sacrifice by the partners.

Ans. :

	Sagar		Sarita		Palak	Total
Old ratio	3	:	3	:	2	8
Old share	$\frac{3}{8}$		$\frac{3}{8}$		$\frac{2}{8}$	
New ratio	1	:	1	:	1	3
New share	$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$	

(1) Explanation with gain formula :

Gain = New share − Old share

(1) Gain to Sagar $= \frac{1}{3} - \frac{3}{8}$

$= \frac{8-9}{24}$

Gain to Sagar $= \frac{-1}{24}$ (Sacrifice)

(2) Gain to Sarita $= \frac{1}{3} - \frac{3}{8}$

$= \frac{8-9}{24}$

Gain to Sarita $= \frac{-1}{24}$ (Sacrifice)

(3) Gain to Palak $= \frac{1}{3} - \frac{2}{8}$

$= \frac{8-6}{24}$

Gain to Palak $= \frac{2}{24}$

As per the above calculation, Sagar and Sarita have sacrificed $\frac{1}{24}$ and $\frac{1}{24}$ respectively and Palak received the gain of $\frac{2}{24}$.

Gain to Palak $=$ Sacrifice by Sagar $+$ Sacrifice by Sarita

$$= \frac{1}{24} + \frac{1}{24}$$

$$= \frac{1+1}{24}$$

Gain to Palak $= \frac{2}{24}$

(2) Explanation with sacrifice formula :

Sacrifice = Old share − New share

(1) Sagar's sacrifice $= \frac{3}{8} - \frac{1}{3}$

$$= \frac{9-8}{24}$$

Sagar's sacrifice $= \frac{1}{24}$

(2) Sarita's sacrifice $= \frac{3}{8} - \frac{1}{3}$

$$= \frac{9-8}{24}$$

Sarita's sacrifice $= \frac{1}{24}$

(3) Palak's sacrifice $= \frac{2}{8} - \frac{1}{3}$

$$= \frac{6-8}{24}$$

Palak's sacrifice $= \frac{-2}{24}$ (Gain)

As per the above calculation, Sagar and Sarita have sacrificed and the benefit is received by Palak.

Gain to Palak $=$ Sagar's sacrifice $+$ Sarita's sacrifice

$$= \frac{1}{24} + \frac{1}{24}$$

$$= \frac{1+1}{24}$$

Gain to Palak $= \frac{2}{24}$

As per the above calculation we can say that the answer will remain same both in gain formula and sacrifice formula. In this way, whenever there is a change in profit and loss sharing ratio between the existing partners necessary calculation can be made by sacrifice or gain formula.

In short, whenever calculation is made by gain formula and if the answer is positive (+) then it is a gain and if the answer is negative (−) then it is a sacrifice.

Whenever calculation is made by the sacrifice formula and if the answer is positive (+) then it is a sacrifice and if the answer is negative (−) then it is a gain.

Difference Between Sacrifice Ratio and Gaining Ratio :

Sacrifice Ratio	Gaining Ratio
(1) **Meaning :** Old partners giving their profit share in favour of the new partners, OR changes in existing partners' profit-loss ratio due to the reconstruction of a partnership firm where any partners gives its profit share in favour of other partners is called sacrifice.	(1) Share of retiring partners received by existing partners, OR changes in existing partners' profit-loss sharing ratio, where some partner's sacrifice is received by existing partners is called gain ratio.
(2) **When is it computed ? :** At the time of admission of new partner and reconstruction of partnership firm, sacrifice ratio of old partners is computed.	(3) At the time of the retirement of a partner and at the time of the reconstruction of partnership, gaining ratio of existing partners is found.
(3) **Formula :** Sacrifice = Old share − New share	(3) Gain = New share − Old share
(4) **Why is it found ?** Sacrifice ratio is found to distribute the goodwill which is broughts in a new partner for his share and to give by adjustments of goodwill at the time of the reconstruction of a partnership firm.	(4) Gaining ratio is found for the share of goodwill to the retiring partner by the existing partners in their gain ratio and to give adjustment of goodwill due to the reconstruction of a partnership firm.

Now let us discuss another important point regarding the reconstruction of partnership.

3. Revaluation Accounts of Assets and Liabilities of a Partnership Firm and its Accounting Effects

The book value of assets and liabilities recorded in the books of a partnership firm when brought at present value it is called revaluation of assets. It means, recorded assets and liabilities are shown at new value which is called revaluation of assets and liabilities. Recorded assets and liabilities may be higher or lesser than its actual or real value. It may be possible that, with the passage of time, the price of fixed assets such as land and building may go up. In the same manner, there may not be any provision for reserve on debtors or bills receivable. In the same manner, it may be possible that liabilities increase or decrease or the liabilities remain unrecorded. Due to all these reasons if the partners have decided to revalue the assets and liabilities of the firm then its accounting effects are given.

- **Accounting effects of revaluation of assets and liabilities of a partnership firm :**

A special account is opened in the books of a partnership firm to record the accounting effects of the revaluation of assets and liabilities. This account is called the 'Revaluation Account'. Generally, whenever there is reconstruction of a partnership firm (changes in profit and loss sharing ratio), assets and liabilities of the firm are revalued. So assets and liabilities can be recorded at their real value in the firm's accounts and there is no possibility that any partner has to suffer because of the reconstruction of a partnership. For the same reasons, at the time of admission of a new partner in the existing partnership firm or at the time of retirement or death of a partner of the existing firm, assets and liabilities are revalued.

At the time of giving the accounting effect of revaluation, following rules should be remembered.

(1) If there is increase in assets-receivable then it is called profit.

(2) If there is decrease in assets-receivable then it is called loss.

(3) If there is increase in liabilities-provisions then it is called loss.

(4) If there is decrease in liabilities-provisions then it is called profit.

(5) If unrecorded assets are brought to books then it is a profit.

(6) If unrecorded liabilities are brought to books then it is a loss.

In above circumstances, when profit arise then respective account is debited and revaluation account is credited and when loss arise then the revaluation account is debited and the respective account is credited.

Balance of assets is always debit. Therefore, if assets value increases then assets account will be debited and revaluation account will be credited as it is a profit. On the contrary, if assets value decreases then revaluation account will be debited and assets account will be credited.

Balance of liabilities is always credit. Therefore if the liabilities value increases then the realisation account will be debited and the liabilities account will be credited, as it is a loss. On the contrary if the liabilities value decreases then the liabilities account will be debited and revaluation account will be credited.

Effect of changes (effect of adjustments) in the value of assets and liabilities are given in the revaluation account. So, it is also known, as profit and loss adjustment account.

At the time of revaluation of assets and liabilities, following journal entries are passed in the books of firm.

Journal Entry

	Particulars	**L.F.**	**Debit (₹)**	**Credit (₹)**
(1)	When there is an increase in the value of assets then :			
	Respective assets A/c Dr		✓	
	To Revaluation A/c			✓
	[Being the assets value increase is recorded due to revaluation.]			
(2)	When there is decrease in the value of assets then :			
	Revaluation assets A/c Dr		✓	
	To Respective assets A/c			✓
	[Being the assets value decreased due to revaluation is recorded.]			
(3)	When there is a provision for doubtful debt or discount reserve etc. on debtor then :			
	Revaluation A/c Dr		✓	
	To Bad debt reserve A/c			✓
	To Discount reserve on debtors A/c			✓
	[Being the provision made for bad debts reserve and discount reserve on debtors.]			

	Particulars	L.F.	Debit (₹)	Credit (₹)
(4)	If there is an unrecorded assets, accrued income or prepaid expenses then :			
	Respective assets A/c Dr		✓	
	Accrued income A/c Dr		✓	
	Prepaid expenses A/c Dr		✓	
	To Revaluation A/c			✓
	[Being the unrecorded assets, income receivable, and prepaid expenses are recorded.]			
(5)	If there is an increase in amount of liability then :			
	Revaluation A/c Dr		✓	
	To Respective liability A/c			✓
	[Being the liability amount increased due to revaluation.]			
(6)	If there is a decrease in amount of liability then :			
	Respective liability A/c Dr		✓	
	To Revaluation A/c			✓
	[Being the liability amount decreased to due to revaluation.]			
(7)	When an entry made for unrecorded liability in the books then :			
	Revaluation A/c Dr		✓	
	To Outstanding liability			✓
	[Being the unrecorded liability is recorded.]			
(8)	When revaluation account is closed then :			
	(A) If profit of revaluation account :			
	Revaluation A/c Dr		✓	
	To Partner's capital/current A/c			✓
	[Being due to revaluation, profit is distributed between partners in the ratio of profit-loss.]			
	(B) If loss of revaluation account :			
	Partners' capital/current A/c Dr		✓	
	To Revaluation A/c			✓
	[Being due to revaluation, loss is distributed between partners in the ratio of profit-loss.]			

- **Specimen/proforma of revaluation account is as under :**

Dr Cr

Particular	Amt. (₹)	Particular	Amt. (₹)
To Assets A/c (2)	✓	By Assets A/c (1)	✓
(Decrease in assets value)		(Increase in assets value)	
To Bad debt reserve A/c (3)	✓	By Assets A/c (4)	✓
To Discount reserve on debtors A/c (3)	✓	(Unrecorded assets)	
To Liabilities (Increase in liabilities) (5)	✓	By Accrued income A/c (4)	✓
To Outstanding liability A/c	✓	By Prepaid expenses A/c (4)	✓
(Increase in liability value) (7)		By Liability A/c (6)	✓
To Partners' capital A/c : Profit (8A)	✓	(Decrease in value)	
		By Partners' capital A/c : Loss (8B)	✓
	✓		✓

Note : The figure in the bracket shows No./Index of journal entries. It means revaluation account is a posting of journal entries of revaluation.

The above journal entry no. 8 will be passed after the preparation of the revaluation account. If the balance of revaluation account is credited then it is called profit and if it is a debit balance then it is called loss. The profit or loss is transferred to the present partners' capital accounhts in their old profit and loss sharing ratio, as the profit or loss has been increased before the changes made in the profit-loss sharing ratio.

Illustration 7 : Bhavna, Bharat and Bhumesh are the partners in a partnership firm sharing profit and loss in the ratio of 2:1:1. The following is their balance sheet as on 31-3-2017.

Balance Sheet as on 31-3-2017

Liabilities		Amt. (₹)	Assets	Amt. (₹)
Capital account :			Land	5,00,000
Bhavna	6,00,000		Building	8,00,000
Bharat	6,00,000		Machinery	4,00,000
Bhumesh	5,40,000	17,40,000	Furniture	50,000
Creditors		2,00,000	Investment	50,000
Bills payable		60,000	Debtors	1,00,000
			Bills receivable	30,000
			Cash balance	20,000
			Bank balance	50,000
		20,00,000		**20,00,000**

Partners have decided to revaluate the assets and liabilities on the date of the above balance-sheet.

(1) The value of land is ₹ 7,00,000.

(2) The value of building is increased by ₹ 1,00,000.

(3) The market-value of machine is ₹ 2,50,000 which is to be recorded in the books.

(4) Provision for doubtful debts at 20 % on debtors.

(5) Creditors amounting to ₹ 10,000, are not required to be paid.

(6) Income receivable amounted to ₹ 5000 and outstanding expenses amounted to ₹ 3000 which are to be recorded.

From the above information, write journal-entry in the books of partnership firm for revaluation and prepare revaluation A/c.

Ans. : Journal Entry in the Books of Partnership Firm of Bhavna, Bharat and Bhumesh

Date	Particulars	L.N.	Debit (₹)	Credit (₹)
(1)	Land A/c Dr		2,00,000	
	To Revaluation A/c			2,00,000
	[Being due to revaluation, there is an increase in price of land ₹ 2,00,000.]			
(2)	Building A/c Dr		1,00,000	
	To Revaluation A/c			1,00,000
	[Being due to revaluation there is an increase in price of building ₹ 1,00,000.]			
(3)	Revaluation A/c Dr		1,50,000	
	To Machinery A/c			1,50,000
	[Being due to revaluation, there is decrease in price of machinery ₹ 1,50,000.]			
(4)	Revaluation A/c Dr		20,000	
	To Bad debt reserve A/c			20,000
	[Being the provision for doubtful debts ₹ 20,000 on ₹ 1,00,000 debtors @ 10 %.]			
(5)	Creditors A/c Dr		10,000	
	To Revaluation A/c			10,000
	[Being an amount of ₹ 10,000 not to be paid to creditors.]			
(6)	Receivable income A/c Dr		5000	
	To Revaluation A/c			5000
	[Being the unrecorded receivable income is recorded.]			
(7)	Revaluation A/c Dr		3000	
	To Outstanding expenses A/c			3000
	[Being the unrecorded outstanding expense is recorded.]			
	Total carry forward		4,88,000	4,88,000

Date	Particulars	L.N.	Debit (₹)	Credit (₹)
	Total bring forward		4,88,000	4,88,000
(8)	Revaluation A/c Dr		1,42,000	
	To Bhavna's capital A/c			71,000
	To Bharat's capital A/c			35,500
	To Bhumesh's capital A/c			35,500
	[Being the profit due to revaluation distributed among the partners in their profit sharing ratio.]			
	Total		**6,30,000**	**6,30,000**

Revaluation Account as on 31-3-2017 (Profit-loss adjustment A/c)

Dr Cr

Particulars		Amt. (₹)	Particulars	Amt. (₹)
To Machinery A/c		1,50,000	By Land A/c	2,00,000
To Bad debt reserve A/c		20,000	By Building A/c	1,00,000
To Outstanding expense A/c		3000	By Creditors A/c	10,000
Profit : To partners' capital A/c (2:1:1)			By Income receivable A/c	5000
Bhavna	71,000			
Bharat	35,500			
Bhumesh	35,500	1,42,000		
		3,15,000		**3,15,000**

Explanation :

Particulars	Old	New	Increased	Decreased	Profit	Loss	Revaluation A/c
Land	5,00,000	7,00,000	2,00,000	–	2,00,000	–	Credit
Building	8,00,000	9,00,000	1,00,000	–	1,00,000	–	Credit
Machinery	4,00,000	2,50,000	–	1,50,000	–	1,50,000	Debit
Bad debt reserve	–	20,000	20,000	–	–	20,000	Debit
Creditors Income	2,00,000	1,90,000	–	10,000	10,000	–	Credit
Receivable	–	5000	5000	–	5000	–	Credit
Outstanding Expenses	–	3000	3000	–	–	3000	Debit
					3,15,000	**1,73,000**	

Illustration 8 : Harish, Dhruvil and Manoj are the partners of a partnership firm. Their profit-loss sharing ratio is 3:2:1. Balance-sheet of the firm as on 31-3-2017 is as given on page no. 123.