

RS Aggarwal Solutions for Class 8 Maths Chapter 10 Exercise 10.1: RS Aggarwal Solutions for Class 8 Maths Chapter 10 Profit and Loss Exercise 10.1 provides a detailed guide to mastering the fundamental concepts of this topic. This exercise introduces students to various problems involving the calculation of profit, loss, and percentage changes.

By working through Exercise 10.1 students can gain a solid understanding of key concepts such as cost price, selling price, profit percentage, and loss percentage. These solutions are designed to enhance students problem-solving skills, clarify their doubts, and prepare them thoroughly for exams on profit and loss.

[CBSE Compartment Result 2024](#)

RS Aggarwal Solutions for Class 8 Maths Chapter 10 Exercise 10.1 Overview

RS Aggarwal Solutions for Class 8 Maths Chapter 10 Exercise 10.1 provide a detailed overview of fundamental concepts related to profit and loss. This exercise focuses on practical problems that require students to calculate profit, loss, and percentage changes based on given cost price and selling price.

Students will learn to apply formulas for determining profit and loss percentages, understand the difference between cost price (CP) and selling price (SP), and solve problems involving discounts and markups. The exercise provides a step-by-step approach to solving each problem, helping students grasp the key concepts and techniques needed for accurate calculations.

By solving the Exercise 10.1, students can strengthen their understanding of profit and loss, improve their mathematical skills, and build a strong foundation for more complex financial calculations in future studies.

RS Aggarwal Solutions for Class 8 Maths Chapter 10 Exercise 10.1 PDF

The PDF for RS Aggarwal Solutions for Class 8 Maths Chapter 10 Exercise 10.1 is now available for download. This PDF provides detailed solutions to all the exercises in the chapter focusing on profit and loss calculations.

It includes step-by-step explanations and methods to help students understand and apply key concepts effectively. To access the PDF and enhance your understanding of profit and loss problems please use the link provided below:

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RS Aggarwal Solutions for Class 8 Maths Chapter 10

Exercise 10.1 (Exercise 10A)

RS Aggarwal Solutions for Class 8 Maths Chapter 10 Exercise 10.1 are available below. This resource provide detailed solutions and explanations for problems related to operations on profit and loss.

(Question 1) Find the gain or loss per cent when:

(i) CP = Rs 620 and SP = Rs 713

Solution: Gain = SP – CP = Rs (713 – 620) = Rs 93

$$\begin{aligned}\text{Gain \%} &= \left(\frac{\text{gain}}{\text{CP}} \times 100 \right) \% \\ &= \left(\frac{93}{620} \times 100 \right) \% = 15\%\end{aligned}$$

(ii) CP = Rs 675 and SP = Rs 630

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Solution: Loss = CP – SP = Rs (675 – 630) = Rs 45

$$\begin{aligned}\text{Loss \%} &= \left(\frac{\text{loss}}{\text{CP}} \times 100 \right) \% \\ &= \left(\frac{45}{675} \times 100 \right) \% = 6\frac{2}{3}\%\end{aligned}$$

(iii) CP = Rs 345 and SP = Rs 372.60

Solution: Gain = Rs (372.60 – 345.00) = Rs 27.6

$$\begin{aligned}\text{Gain \%} &= \left(\frac{27.6}{345} \times 100 \right) \% \\ &= \left(\frac{276}{10 \times 345} \times 100 \right) \% = 8\%\end{aligned}$$

(iv) CP = Rs 80 and SP = Rs 76.80

Solution: Loss = Rs (80.00 – 76.80) = Rs 3.2

$$\begin{aligned}\text{Loss \%} &= \left(\frac{3.2}{80} \times 100 \right) \% \\ &= \left(\frac{32}{10 \times 80} \times 100 \right) \% = 4\%\end{aligned}$$

(Question 2) Find the selling price when:

(i) CP = Rs 1650 and gain = 4%

$$\begin{aligned}\text{Solution: SP} &= \frac{(100 + \text{gain}\%)}{100} \times \text{CP} \\ &= \text{Rs} \left[\frac{(100 + 4)}{100} \times 1650 \right] \\ &= \text{Rs} \left(\frac{104}{100} \times 1650 \right) = \text{Rs } 1716\end{aligned}$$

(ii) CP = Rs 915 and gain = $6\frac{2}{3}\%$

$$\begin{aligned}\text{Solution: SP} &= Rs \left[\frac{\left(100 + \frac{20}{3}\right)}{100} \times 915 \right] \\ &= Rs \left[\frac{\left(\frac{320}{3}\right)}{100} \times 915 \right] \\ &= Rs \left(\frac{320}{300} \times 915 \right) = Rs 976\end{aligned}$$

(iii) CP = Rs 875 and loss = 12%

$$\begin{aligned}\text{Solution: SP} &= Rs \left[\frac{(100 - 12)}{100} \times 875 \right] \\ &= Rs \left(\frac{88}{100} \times 875 \right) = Rs 770\end{aligned}$$

(iv) CP = Rs 645 and loss = $13\frac{1}{3}\%$

$$\begin{aligned}\text{Solution: SP} &= Rs \left[\frac{\left(100 - \frac{40}{3}\right)}{100} \times 645 \right] \\ &= Rs \left[\frac{\left(\frac{300 - 40}{3}\right)}{100} \times 645 \right] \\ &= Rs \left(\frac{260}{300} \times 645 \right) = Rs 559\end{aligned}$$

(Question 3) Find the cost price when:

(i) SP = Rs 1596 and gain = 12%

$$\begin{aligned}\text{Solution: CP} &= \frac{100}{(100 + \text{gain}\%)} \times \text{SP} \\ &= \text{Rs} \left(\frac{100}{112} \times 1596 \right) = \text{Rs} 1425\end{aligned}$$

(ii) SP = Rs 2431 and loss = $6\frac{1}{2}\%$

$$\begin{aligned}\text{Solution: CP} &= \text{Rs} \left[\frac{100}{\left(\frac{200 - 13}{2} \right)} \times 2431 \right] \\ &= \text{Rs} \left(\frac{200}{187} \times 2431 \right) = \text{Rs} 2600\end{aligned}$$

(iii) SP = Rs 657.60 and loss = 4%

$$\text{Solution: CP} = \text{Rs} \left(\frac{100}{96} \times \frac{65760}{100} \right)$$

$$= \text{Rs } 685$$

$$\text{(iv) SP} = \text{Rs } 34.40 \text{ and gain} = 7\frac{1}{2}\%$$

$$\text{Solution: CP} = \text{Rs} \left[\frac{100}{\left(100 + \frac{15}{2}\right)} \times \frac{3440}{100} \right]$$

$$= \text{Rs} \left[\frac{100}{\left(\frac{200+15}{2}\right)} \times \frac{3440}{100} \right]$$

$$= \text{Rs} \left(\frac{200}{215} \times \frac{3440}{100} \right) = \text{Rs } 32$$

(Question 4) Manjit bought an iron safe for Rs 12160 and paid Rs 340 for its transportation. Then, he sold it for Rs 12875. Find his gain per cent.

Solution: CP of the iron = Rs 12160, overheads = Rs 340

Total cost price = Rs (12160 + 340) = Rs 12500

Selling price = Rs 12875

Since, (SP) > (CP), Manjit gains,

Gain = Rs (12875 – 12500) = Rs 375

$$\text{Gain \%} = \left(\frac{375}{12500} \times 100 \right) \% = 3\%$$

(Question 5) Hari bought 20 kg of rice at Rs 36 per kg and 25 kg of rice at Rs 32 per kg. He mixed the two varieties and sold the mixture at Rs 38 per kg. Find his gain per cent in the whole transaction.

Solution: Cost of 20 kg rice = Rs (36 × 20) = Rs 720

Cost of 25 kg rice = Rs (32×25) = Rs 800

Total CP of rice = Rs $(720 + 800)$ = Rs 1520.

SP of the $(20 + 25)$ = 45 kg rice = Rs (45×38) = 1710

Since, $(SP) > (CP)$

Gain = Rs $(1710 - 1520)$ = Rs 190

$$\text{Gain \%} = \left(\frac{190}{1520} \times 100 \right) \% = 12\frac{1}{2}\%$$

(Question 6) Coffee costing Rs 250 per kg was mixed with chicory costing Rs 75 per kg in the ratio 5 : 2 for a certain blend. If the mixture was sold at Rs 230 per kg, find the gain or loss per cent.

Solution: Let mixed of coffee and chicory be 5 kg and 2 kg respectively.

CP of the mixture = Rs $[(250 \times 5) + (75 \times 2)]$ = Rs $(1250 + 150)$ = Rs 1400

SP = Rs (7×230) = Rs 1610

Since, $(SP) > (CP)$

Gain = Rs $(1610 - 1400)$ = Rs 210

$$\text{Gain \%} = \left(\frac{210}{1400} \times 100 \right) \% = 15\%$$

(Question 7) If the selling price of 16 water bottles is equal to the cost price of 17 water bottles. Find the gain per cent earned by the dealer.

Solution: Let the sell price of each candles be Rs x.

Then, SP of 17 water bottles = Rs 17x.

CP of 17 water bottles = SP of 16 water bottles = Rs 16x

Thus, SP = Rs 17x and CP = Rs 16x

Since, $(SP) > (CP)$

Gain = Rs $(17x - 16x)$ = Rs x.

$$\text{Gain\%} = \left(\frac{x}{16x} \times 100 \right) \% = 6\frac{1}{4}\%$$

(Question 8) The cost price of 12 candles is equal to the selling price of 15 candles. Find the loss per cent.

Solution: Let the CP of each candle be Rs x.

Then, CP of 15 candles = Rs 15x

SP of 15 candles = CP of 12 candles = Rs 12x

Thus, CP = Rs 15x and SP = 12x

Since, CP > SP

Loss = Rs (15x – 12x) = Rs 3x

$$\text{Loss \%} = \left(\frac{3x}{15x} \times 100 \right) \% = 20\%$$

(Question 9) By selling 130 cassettes, a man gains an amount equal to the selling price of 5 cassettes. Find the gain per cent.

Solution: Gain = (SP of 130 cassettes) – (CP of 130 cassettes)

⇒ (SP of 5 cassettes) = (SP of 130 cassettes) – (CP of 130 cassettes)

⇒ (SP of 5 cassettes) – (SP of 130 cassettes) = – (CP of 130 cassettes)

⇒ – (SP of 125 cassettes) = – (CP of 130 cassettes)

⇒ (SP of 125 cassettes) = (CP of 130 cassettes)

Let the Sp of the each cassettes be Rs x.

SP of the 5 cassettes = Rs 5x

SP of the 125 cassettes = Rs 125x

Gain = SP – CP

⇒ CP = SP – gain

= 125x – 5x = Rs 120x

$$\text{Gain percent} = \left(\frac{5x}{120x} \times 100 \right) \% = 4\frac{1}{6}\%$$

(Question 10) By selling 45 lemons, a vendor loses a sum equal to the selling price of 3 lemons. Find his gain or loss per cent.

Solution: Loss = (CP of 45 lemons) – (SP of 45 lemons)

\Rightarrow (SP of 3 lemons) = (CP of 45 lemons) – (SP of 45 lemons)

\Rightarrow (SP of 3 lemons) + (SP of 45 lemons) = (CP of 45 lemons)

\Rightarrow (SP of 48 lemons) = (CP of 45 lemons)

Let the CP of each lemon be Rs x.

Then, CP of 48 lemons = Rs 48x

Thus CP = Rs 48x and SP = Rs 45x

Since, (CP) > (SP)

Loss = Rs (48x – 45x) = Rs 3x

$$\text{Loss \%} = \left(\frac{3x}{48x} \times 100 \right) \% = 6\frac{1}{4}\%$$

(Question 11) Oranges are bought at 6 for Rs 20 and sold at 4 for Rs 18. Find the gain or loss per cent.

Solution: LCM of 6 and 4 = 12

Let the number of oranges bought be 12.

CP of 6 oranges = Rs 20.

$$\text{CP of 1 orange} = \text{Rs } \left(\frac{20}{6}\right)$$

$$\text{CP of 12 oranges} = \text{Rs } \left(\frac{20}{6} \times 12\right) = \text{Rs } 40$$

$$\text{SP of 4 oranges} = \text{Rs } 18$$

$$\text{SP of 1 oranges} = \text{Rs } \left(\frac{18}{4}\right)$$

$$\text{SP of 12 oranges} = \text{Rs } \left(\frac{18}{4} \times 12\right) = \text{Rs } 54$$

\therefore CP = Rs 40 and SP = Rs 54

Since, SP > CP

Gain = Rs (54 – 40) = Rs 14

$$\text{Gain \%} = \left(\frac{14}{40} \times 100\right) = 35\%$$

(Question 12) A vendor purchased bananas at Rs 40 per dozen and sold them at 10 for Rs 36. Find his gain or loss per cent.

Solution: LCM of 12 and 10 = 60

Let the number of bananas bought be 60.

CP of 12 bananas = Rs 40

$$\text{CP of 12 bananas} = \text{Rs } \left(\frac{40}{12}\right)$$

$$\text{CP of 60 bananas} = \text{Rs } \left(\frac{40}{12} \times 60\right) = \text{Rs } 200$$

$$\text{SP of 12 bananas} = \text{Rs } 36$$

$$\text{SP of 1 banana} = \text{Rs } \left(\frac{36}{12}\right)$$

$$\text{SP of 60 bananas} = \text{Rs } \left(\frac{36}{12} \times 60\right) = \text{Rs } 216$$

\therefore CP = Rs 200 and SP = Rs 216

Since, SP > CP

$$\text{Gain} = \text{Rs } (216 - 200) = \text{Rs } 16$$

$$\text{Gain \%} = \left(\frac{16}{200} \times 100\right) \% = 8\%$$

(Question 13) A man bought apples at 10 for Rs 75 and sold them at Rs 75 per dozen. Find his loss per cent.

Solution: LCM of 10 and 12 = 60

Let the number of apples bought be 60.

$$\text{CP of 10 apples} = \text{Rs } 75$$

$$\text{CP of 1 apples} = \text{Rs } \left(\frac{75}{10}\right)$$

$$\text{CP of 60 apples} = \text{Rs } \left(\frac{75}{10} \times 60\right) = \text{Rs } 450$$

$$\text{SP of 12 apples} = \text{Rs } 75$$

$$\text{SP of 1 apples} = \text{Rs } \left(\frac{75}{12}\right)$$

$$\text{SP of 60 apples} = \text{Rs } \left(\frac{75}{12} \times 60\right) = \text{Rs } 375$$

$$\therefore \text{CP} = \text{Rs } 450 \text{ and } \text{SP} = \text{Rs } 375$$

Since, $\text{CP} > \text{SP}$

$$\text{Loss} = \text{Rs } (450 - 375) = \text{Rs } 75$$

$$\text{Loss \%} = \left(\frac{75}{450} \times 100\right) = 16\frac{2}{3}\%$$

(Question 14) A man purchased some eggs at 3 for Rs 16 and sold them at 5 for Rs 36. Thus, he gained Rs 168 in all. How many eggs did he purchase?

Solution: Let the number of eggs be x .

$$\text{CP of 3 eggs} = \text{Rs } 16$$

$$\text{CP of } x \text{ eggs} = \text{Rs } \frac{16x}{3}$$

$$\text{SP of 5 eggs} = \text{Rs } 36$$

$$\text{SP of } x \text{ eggs} = \text{Rs } \frac{36x}{5}$$

$$\begin{aligned} \text{Gain} &= \text{Rs } \left(\frac{36x}{5} - \frac{16x}{3} \right) \\ &= \text{Rs } \frac{108x - 80x}{15} = \text{Rs } \frac{28x}{15} \end{aligned}$$

$$\text{Now, } \frac{28x}{15} = 168$$

$$\Rightarrow 28x = 2520$$

$$\Rightarrow x = 90$$

Hence, the man purchase 90 eggs.

(Question 15) A dealer sold a camera for Rs 1080 gaining 1/8 of its cost price. Find (i) the cost price the camera, and (ii) the gain per cent earned by the dealer.

Solution: SP of the camera = Rs 1080

Let Rs x be the CP.

$$\text{Gain} = \text{Rs } (1/8)x \dots\dots(i)$$

$$\text{Also gain} = \text{Rs } (1080 - x) \dots\dots(ii)$$

From (i) and (ii), we have:

From (i) and (ii), we have:

$$\therefore 1/8 x = 1080 - x$$

$$\Rightarrow x = 8640 - 8x$$

$$\Rightarrow x + 8x = 8640$$

$$\Rightarrow 9x = 8640$$

$$\Rightarrow x = 960$$

$$\therefore \text{CP} = \text{Rs } 960$$

$$\text{Gain} = \text{Rs } \frac{960}{8} = \text{Rs } 120$$

$$\therefore \text{Gain}\% = \left(\frac{12}{960} \times 100 \right) \% = 12\frac{1}{2}\%$$

(Question 16) Meenakshi sells a pen for Rs 54 and loses $\frac{1}{10}$ of her outlay. Find (i) the cost price of the pen and (ii) the loss per cent.

Solution: SP of the pen = Rs 54

Let the CP of the pen be Rs x.

$$\text{Loss} = \text{Rs } \frac{x}{10}$$

$$\text{SP} = \text{CP} - \text{Loss} = \text{Rs } x - \frac{x}{10} = \text{Rs } \frac{9x}{10}$$

$$\therefore \frac{9x}{10} = 54$$

$$\Rightarrow 9x = 540$$

$$\Rightarrow x = 60$$

$$\therefore \text{CP of the pen} = \text{Rs } 60$$

$$\text{Loss} = \frac{x}{10} = \frac{60}{10} = \text{Rs } 6$$

$$\therefore \text{Loss}\% = \left(\frac{6}{60} \times 100 \right) \% = 10\%$$

(Question 17) A dealer gets Rs 940 more if instead of selling a table at a loss of 10%, it is sold at a gain of 10%. Find the cost price of the table.

Solution: Let the CP of the table be Rs x.

While he loss:

Loss % = 10%

$$\Rightarrow 10 = \left(\frac{\text{loss}}{x} \times 100 \right)$$

$$\Rightarrow 10x = \text{loss} \times 100$$

$$\Rightarrow \text{Loss} = \frac{10x}{100} = \text{Rs } \frac{x}{10}$$

Suppose that SP is the selling price when he incurs a loss of 10%.

$$\text{Loss} = \text{Rs } \frac{x}{10}$$

$$\Rightarrow \text{CP} - \text{SP} = \frac{x}{10}$$

$$\Rightarrow \text{SP} = x - \frac{x}{10}$$

$$\Rightarrow \text{SP} = \frac{10x - x}{10} = \text{RS } \frac{9x}{10}$$

While he gain 10%:

$$\text{Gain \%} = 10\%$$

$$\Rightarrow 10 = \left(\frac{\text{gain}}{x} \times 100 \right)$$

$$\Rightarrow 10x = \text{Gain} \times 100$$

$$\Rightarrow \text{Gain} = \text{Rs } \frac{x}{10}$$

Suppose last second SP is selling price when he makes gain of 10%.

(Question 18) A dealer gets Rs 56 less if instead of selling a chair at a gain 15%, it is sold at a gain of 8%. Find the cost price of the chair.

Solution: Let the cost price of the chair be Rs x.

$$\text{SP of the chair at 15\% gain} = \text{Rs } \left(\frac{100+15}{100} \times x \right) = \text{Rs } \frac{115x}{100}$$

$$\text{SP of the chair at 8\% gain} = \text{Rs } \left(\frac{100+8}{100} \times x \right) = \text{Rs } \frac{108x}{100}$$

$$\therefore \frac{115x}{100} - \frac{108x}{100} = 56$$

$$\Rightarrow \frac{115x-108x}{100} = 56$$

$$\Rightarrow 7x = 5600$$

$$\Rightarrow x = 800$$

Hence, the cost price of the chair is Rs 800.

(Question 19) A cycle was sold at a gain of 10%. Had it been sold for Rs 260 more, the gain would have been 14%. Find the cost price of the cycle.

Solution: Let the cost price of the cycle be Rs x.

$$\text{SP of the cycle at 10\% gain} = \text{Rs } \left(\frac{100+10}{100} \times x \right) = \text{Rs } \frac{110x}{100}$$

$$\text{SP of the cycle at 14\% gain} = \text{Rs } \left(\frac{100+14}{100} \times x \right) = \text{Rs } \frac{114x}{100}$$

$$\therefore \frac{114x}{100} - \frac{110x}{100} = 260$$

$$\Rightarrow \frac{114x-110x}{100} = 260$$

$$\Rightarrow 4x = 26000$$

$$\Rightarrow x = 6500$$

Hence, the cost price of the cycle is Rs 6500.

(Question 20) Sonu buys 40 kg of wheat at Rs 12.50 per kg and 30 kg of wheat at Rs 14 per kg. At what rate per kg should he sell the mixture to gain 5% on the whole?

Solution: CP of the first variety of wheat = Rs (40×12.50) = Rs 500

CP of second variety of wheat = Rs (30×14) = Rs 420.

Total Cp of wheat = Rs $(500 + 420)$ = Rs 920.

Total amount of wheat = $(40 + 30)$ kg = 70 kg

$$\therefore \text{Gain} = \frac{920}{100} \times 5$$

$$\Rightarrow \text{Gain} = \text{Rs } 46$$

$$\therefore \text{SP} = \text{Rs } (920 + 46) = \text{Rs } 966$$

$$\therefore \text{Rate per kg} = \text{Rs } \frac{966}{70} = \text{Rs } 13.80$$

(Question 21) Wasim bought two cricket bats for Rs 840 and Rs 360 respectively. He sells the first bat at a gain of 15% and the second one at a loss of 5%. Find his gain or loss per cent in the whole transaction.

Solution: CP of the first bat = Rs 840.

Gain% = 15%

$$\begin{aligned}\therefore \text{SP of the first bat} &= \text{Rs} \left\{ \frac{(100+15)}{100} \times 840 \right\} \\ &= \text{Rs} \left(\frac{115}{100} \times 840 \right) = \text{Rs } 966\end{aligned}$$

CP of the Second bat = Rs 360

Loss% = 5%

$$\begin{aligned}\text{SP of the second bat} &= \text{Rs} \left\{ \frac{(100-5)}{100} \times 360 \right\} \\ &= \text{Rs} \left(\frac{95}{100} \times 360 \right) = \text{Rs } 342\end{aligned}$$

Total CP of two bats = Rs (840 + 360) = Rs 1200

Total SP of two bats = Rs (966 + 342) = Rs 1308

Since, SP > CP

Gain = Rs (1308 – 1200) = Rs 108

$$\therefore \text{Gain \%} = \left(\frac{108}{1200} \times 100 \right) \% = 9\%$$

(Question 22) Hema bought two pairs of jeans for Rs 1450 each. She sold one of them at a gain of 8% and the other at a loss of 4%. Find her gain or loss per cent in the whole transaction.

Solution: CP of the first jeans = Rs 1450.

Gain% = 8%

$$\begin{aligned}\text{SP of the first jeans} &= \text{Rs} \left\{ \frac{(100+8)}{100} \times 1450 \right\} \\ &= \text{Rs} \left(\frac{108}{100} \times 1450 \right) = \text{Rs } 1566\end{aligned}$$

CP of the second jeans = Rs 1450.

Loss % = 4%

$$\begin{aligned}\text{SP of the second jeans} &= \text{Rs} \left\{ \frac{(100-4)}{100} \times 1450 \right\} \\ &= \text{Rs} \left(\frac{96}{100} \times 1450 \right) = \text{Rs } 1392\end{aligned}$$

Total CP of two jeans = Rs (1450 + 1450) = Rs 2900

Total SP of two jeans = Rs (1566 + 1392) = Rs 2958

Since, SP > CP

∴ Gain = Rs (2958 – 2900) = Rs 58

$$\text{Gain\%} = \left(\frac{58}{2900} \times 100 \right) = 2\%$$

(Question 23) A grocer purchased 200 kg of rice at Rs 25 per kg. He sold 80 kg of it at a gain of 10% and 40 kg at a loss of 4%. At what rate per kg should he sell the remainder to gain 8% on his total investment?

Solution: CP of 200 kg rice = Rs (200 × 25) = Rs 5000

CP of 80 kg sugar = Rs (80 × 25) = Rs 2000

CP of 40 kg sugar = Rs (40 × 25) = Rs 1000

$$\text{SP of the 80 of sugar at 10\% gain} = \text{Rs} \left\{ \frac{(100+10)}{100} \times 2000 \right\}$$

$$= \text{Rs} \left(\frac{110}{100} \times 2000 \right) = \text{Rs } 2200$$

$$\text{SP of the 40 kg sugar at 4\% loss} = \text{Rs} \left\{ \frac{(100-4)}{100} \times 1000 \right\}$$

$$= \text{Rs} \left(\frac{96}{100} \times 1000 \right) = \text{Rs } 960$$

$$\text{SP of 200 kg sugar at 8\% gain} = \text{Rs} \left[\frac{(100+8)}{100} \times 5000 \right]$$

$$= \text{Rs} \left(\frac{108}{100} \times 5000 \right) = \text{Rs } 5400$$

Money to be earned through sale of remaining 80 kg = Rs (5400 – 2200 + 960) = Rs 2240

Selling price of the remainder rice = Rs (2240/80) kg=Rs 28 per kg

(Question 24) If the selling price of a TV set is equal to 6/5 of its cost price, find the gain percent.

Solution: Let the CP be Rs x.

$$\text{Then, SP} = \text{Rs} \frac{6x}{5}$$

Since, SP > CP

$$\text{Gain} = \text{Rs} \left(\frac{6x}{5} - x \right) = \text{Rs} \left(\frac{6x-5x}{5} \right) = \text{Rs} \frac{x}{5}$$

$$\text{Gain \%} = \left(\frac{x}{5x} \times 100 \right) \% = 20\%$$

(Question 25) If the selling price of a flower vase is $\frac{5}{6}$ of its cost price, find the loss per cent.

Solution: Let the CP be Rs x .

$$\text{Then, SP} = \text{Rs } \frac{5x}{6}$$

$$\text{Loss} = \text{Rs } \left(x - \frac{5x}{6} \right) = \text{Rs } \frac{6x - 5x}{6} = \text{Rs } \frac{x}{6}$$

$$\text{Loss}\% = \left(\frac{x}{6x} \times 100 \right) \% = 16\frac{2}{3}\%$$

(Question 26) By selling a bouquet for Rs 322, a florist gains 15%. At what price should he sell it to gain 25%?

Solution: SP of the bouquet = Rs 322

Gain % = 15%

$$\begin{aligned} \text{CP of the bouquet} &= \left(\frac{100}{100 + 15} \times 322 \right) \\ &= \text{Rs } \left(\frac{100}{115} \times 322 \right) = \text{Rs } 280 \end{aligned}$$

$$\begin{aligned} \text{SP of the bouquet at 25\% gain} &= \text{Rs } \left[\frac{100 + 25}{100} \times 280 \right] \\ &= \text{Rs } \left(\frac{125}{100} \times 280 \right) = \text{Rs } 350 \end{aligned}$$

(Question 26) By selling an umbrella for Rs 336, a shopkeeper losses 4%. At what price must he sell it to gain 4%?

Solution: SP of the umbrella = Rs 336

Loss% = 4%

$$\begin{aligned}\text{CP of the umbrella} &= \text{Rs} \left\{ \frac{100}{(100-4)} \times 336 \right\} \\ &= \text{Rs} \left(\frac{100}{96} \times 336 \right) = \text{Rs } 350\end{aligned}$$

$$\begin{aligned}\text{SP of the umbrella at 4\% gain} &= \text{Rs} \left\{ \frac{(100+4)}{100} \times 350 \right\} \\ &= \text{Rs} \left(\frac{104}{100} \times 350 \right) = \text{Rs } 364\end{aligned}$$

(Question 27) A radio is sold for Rs 3120 at a loss of 4%. What will be the gain or loss per cent if it is sold for Rs 3445?

Solution: Let the original price of radio be Rs x.

SP = Rs 3120.

SP = CP – Loss

$$\Rightarrow 3120 = x - \frac{4x}{100}$$

$$\Rightarrow 3120 = x - \frac{x}{25}$$

$$\Rightarrow \frac{25x-x}{25} = 3120$$

$$\Rightarrow 24x = 78000$$

$$\Rightarrow x = 3250$$

If the radio sold for Rs 3445, then it's a gain because SP > CP

Gain = Rs (3445 – 3250) = Rs 195

$$\therefore \text{Gain}\% = \left(\frac{195}{3250} \times 100 \right) \% = 6\%$$

(Question 28) Laxmi sold two sarees for Rs 1980 each. On one, she lost 10%, while on the other she gained 10%. Find her gain or loss per cent in the whole transaction.

Solution: SP of one saree = Rs 1980

Lost = 10%

$$\begin{aligned} \text{CP of the first saree} &= \text{Rs} \left\{ \frac{100}{(100-10)} \times 1980 \right\} \\ &= \text{Rs} \left(\frac{100}{90} \times 1980 \right) = \text{Rs } 2200 \end{aligned}$$

SP of the second saree = Rs 1980

Gain% = 10%

$$\begin{aligned} \text{CP of the second saree} &= \text{Rs} \left\{ \frac{100}{(100+10)} \times 1980 \right\} \\ &= \text{Rs} \left(\frac{100}{110} \times 1980 \right) = \text{Rs } 1800 \end{aligned}$$

Total SP of the sarees = Rs (1980 + 1980) = Rs 3960

Total CP = Rs (2200 + 1800) = Rs 4000

Since, CP > SP

Loss = Rs (4000 – 3960) = Rs 40

$$\text{Loss}\% = \left(\frac{40}{4000} \times 100 \right) = 1\%$$

(Question 29) A shopkeeper sold two fans for Rs 1140 each. On one he gains 14%, while on the other he loses 5%. Calculate his gain or loss per cent in the whole transaction.

Solution: SP of first fan = Rs 1140

Gain% = 14%

$$\begin{aligned}\text{CP of the first fan} &= \text{Rs} \left\{ \frac{100}{(100+14)} \times 1140 \right\} \\ &= \text{Rs} \left(\frac{100}{114} \times 1140 \right) = \text{Rs } 1000\end{aligned}$$

SP of the second fan = Rs 1140

Loss% = 5%

$$\begin{aligned}\text{CP of the second fan} &= \text{Rs} \left\{ \frac{100}{(100-5)} \times 1140 \right\} \\ &= \text{Rs} \left\{ \frac{100}{95} \times 1140 \right\} = \text{Rs } 1200\end{aligned}$$

Total CP = Rs (1000 + 1200) = Rs 2200

Total SP = Rs (1140 + 1140) = Rs 2280

Since, SP > CP

Gain = Rs (2280 – 2200) = Rs 80

$$\text{Gain\%} = \left(\frac{80}{2200} \times 100 \right) \% = 3.64\%$$

(Question 30) Vinod sold a watch to Arun at a gain of 12% and Arun had to sell it to Manoj at a loss of 5%. If Manoj paid Rs 3990 for it, how much did Vinod pay for the watch?

Solution: SP of the watch Manoj = Rs 3990

Loss% = 5%

$$\begin{aligned}\text{CP for Manoj} &= \text{Rs} \left\{ \frac{3990}{(100-5)} \times 100 \right\} \\ &= \text{Rs} \left(\frac{3990}{95} \times 100 \right) = \text{Rs } 4200\end{aligned}$$

Gain% of the watch for Vinod = 12%

$$\begin{aligned}\text{CP of the watch for Vinod} &= \text{Rs} \left\{ \frac{4200}{(100+12)} \times 100 \right\} \\ &= \text{Rs} \left(\frac{4200}{112} \times 100 \right) = \text{Rs } 3750\end{aligned}$$

(Question 31) Ahmed buys a plot of land for Rs 480000. He sells $\frac{2}{5}$ of it at a loss of 6%. At what gain per cent should he sell the remaining part of the plot to gain 10% on the whole?

Solution: CP of the land = Rs 480000

$$\text{CP of two-fifth of the land} = \text{Rs} \left(\frac{480000 \times 2}{5} \right) = \text{Rs } 192000$$

$$\text{SP of the } 2/5 \text{ of the land} = \text{Rs} \left(\frac{94}{100} \times 192000 \right) = \text{Rs } 180480$$

At a gain of 10%, we have:

$$\text{SP of the land} = \text{Rs} \left(\frac{110}{100} \times 480000 \right) = \text{Rs } 528000$$

$$\text{SP} = \text{Rs} (528000 - 180480) = \text{Rs } 347520$$

$$\text{CP of the remaining part of land} = \text{Rs} \left(\frac{3}{5} \times 480000 \right) = \text{Rs } 288000$$

$$\text{Gain} = \text{Rs} (347520 - 288000) = \text{Rs } 59520$$

$$\text{Gain\%} = \left(\frac{59520}{288000} \times 100 \right) \% = 20\frac{2}{3}\%$$

(Question 32) A grocer bought sugar worth of Rs 4500. He sold one-third of it at a gain of 10%. At what gain per cent must the remaining sugar be sold to have a gain of 12% on the whole?

Solution: CP of sugar = Rs 4500

Profit on $1/3$ of the sugar = 10%

$$\text{CP of } 1/3 \text{ of the sugar} = \text{Rs } \frac{4500}{3} = \text{Rs } 1500$$

$$\text{SP of one - third of the sugar} = \text{Rs } \left(\frac{110}{100} \times 1500 \right) = \text{Rs } 1650$$

$$\text{Profit} = \text{Rs } (1650 - 1500) = \text{Rs } 150.$$

At profit of 12%, we have:

$$\text{SP of sugar} = \text{Rs } \left(\frac{112}{100} \times 4500 \right) = \text{Rs } 5040$$

$$\therefore \text{Gain} = \text{Rs } (5040 - 4500) = \text{Rs } 540$$

$$\text{Profit of the remaining sugar} = \text{Rs } (540 - 150) = \text{Rs } 390$$

$$\text{CP of the remaining sugar} = \text{Rs } (4500 - 1500) = \text{Rs } 3000$$

$$\text{Gain\%} = \left(\frac{390}{3000} \times 100 \right) \% = 13\%$$

Benefits of RS Aggarwal Solutions for Class 8 Maths Chapter 10 Exercise 10.1

- **Detailed Explanations:** Each solution is presented with step-by-step explanations making it easier for students to understand the methods used to solve problems related to profit and loss.
- **Concept Reinforcement:** By working through the solutions students can reinforce their understanding of key concepts such as calculating profit, loss, and percentage changes, which are fundamental in financial mathematics.
- **Enhanced Problem-Solving Skills:** The exercise includes a variety of problems that help students practice and develop their problem-solving skills, allowing them to apply theoretical concepts to practical scenarios.
- **Clarification of Doubts:** The clear and detailed solutions help clarify common doubts and misconceptions about profit and loss calculations, ensuring a stronger grasp of the topic.
- **Exam Preparation:** These solutions provide valuable practice that prepares students for their exams, helping them to tackle similar problems with confidence.

- **Self-Paced Learning:** Students can use the solutions to learn at their own pace, reviewing and practicing as needed to master the concepts before exams.