

PROFIT AND LOSS PERCENT

Subject

Mathematics

Prepared By

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Grade Level

5

Overview

This lesson plan covers teaching content for calculating;

1. Cost price
2. Selling price
3. Profit
4. Loss
5. Profit percentage
6. Loss percentage

Objectives

Students should be able to solve for;

1. Cost price
2. Selling price
3. Profit
4. Loss
5. Profit percentage
6. Loss percentage

Activity Starter/Instruction

1. When the selling price of a good is higher than its cost then, it is called profit. Profit is calculated as the difference between the selling price and the cost price.

$$\text{Profit} = \text{S.P} - \text{C.P}$$

$$\text{S.P} = \text{C.P} + \text{profit}$$

$$\text{C.P} = \text{S.P} - \text{profit}$$
2. Similarly, when the selling price of a good is lower than its cost price then it is called loss. The loss is calculated as the difference between the cost price and the selling price.

$$\text{Loss} = \text{C.P} - \text{S.P}$$

$$\text{C.P} = \text{S.P} + \text{Loss}$$

$$\text{S.P} = \text{C.P} - \text{Loss}$$
3. The formulas for profit and the loss percent are;
4. Profit percent = $\frac{\text{Profit}}{\text{C.P}} \times 100\%$
 Or $\frac{\text{S.P} - \text{C.P}}{\text{C.P}} \times 100\%$
5. Loss percent = $\frac{\text{Loss}}{\text{C.P}} \times 100\%$
 Or $\frac{\text{C.P} - \text{S.P}}{\text{C.P}} \times 100\%$

Teacher Guide

Day 1/ Lesson 1: 15mins

6. Suppose the Cost Price of a book is 15. Let it be sold at 20% profit. What is the selling price?
7. $\text{S.P} = \text{C.P} + \text{Profit}$

$$\text{S.P} = 15 + (20/100) \times 15$$

$$= 15 (1 + 20/100)$$

$$= 15 \times (120/100)$$

$$= 15 \times (6/5)$$

$$= 18$$
8. Writing this product enables speed in calculation. Simplifying this product is easier compared to finding the amount of profit separately first and next adding it to the cost price.

Materials Required

- White Board
- Marker

Additional Resources

- <https://www.math-only-math.com/worksheets-on-profit-and-loss-percentage.html>
- <https://wordpandit.com/profit-and-loss-concepts/>
- <https://www.urbanpro.com/cbse-class-7-maths-comparing-quantity/6590728>
- <https://www.onlinemathlearning.com/profit-loss.html>
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Additional Notes

C.P

Guided Practice

Day 2/ Lesson 2: 15 Mins

1. A book is purchased at \$10. It was sold at \$12. What is the profit percent?
2. C.P = 10 and S.P = 12
Profit = $12 - 10 = 2$
Profit % is $[(\text{Profit}/\text{C.P}) \times 100]\%$
 $(2/10) \times 100\% = 20\%$
3. A boy purchased a pen at \$5. He sold it to his friend for \$4. What is the loss he made in percentage?
4. C.P = 5 and S.P = 4
Loss = $5 - 4 = 1$
Loss % is $[(\text{Loss}/\text{C.P}) \times 100]\%$
 $(1/5) \times 100\% = 20\%$
5. The Loss % is 20%

Guided Practice

Day 3/ Lesson 3: 20mins

1. Raja purchased a bike for Rs. 75000 and he sold it for Rs.55000. Is it the condition of profit or loss? Also, find the profit or loss percentage incurred by him.
2. Cost price (CP) of the bike = Rs. 75000
Selling price (SP) of the bike = Rs.55000
Here, $SP < CP$, it is a loss.
3. Net Loss= $CP - SP = 75000 - 55000 = \text{Rs. } 20000$
4. Now, Raja's loss % will be –
 $(20000/75000) \times 100 = 80/3 = 26.667\%$
5. Loss percent of Raj is 26.67%.

Summary

Ask pupils randomly for answers and go over some of the problems with the class

Assessment Activity

Pupils should be able to solve for; loss, profit, cost price, selling price, loss percentage and profit percentage.
