Formulas of Profit and Loss

Formulas of profit and loss are given below.

When the Selling Price (SP) is greater than Cost Price (CP) the seller makes a Profit or Gain.

Selling Price (SP) > Cost Price (CP) → Profit or Gain

Profit = Selling Price (SP) – Cost Price (CP)

If profit % is required to find then,

Profit % = (Profit/Cost Price) × 100

When the Selling Price (SP) is less than Cost Price (CP) the seller suffers a Loss.

Selling Price (SP) < Cost Price (CP) → Loss

Loss = Cost Price (CP) - Selling Price (SP)

If loss % is required to find then,

Loss % = (Loss/CP) × 100

Examples:

1. Mr. Smith bought a book for $ 85 and sold it for sold it for $ 115. Find his profit or loss percent.

Solution:

Cost Price (CP) = $ 85;

Selling Price (SP) = $ 115

Since SP > CP,

Therefore, Mr. Smith makes a profit.

Profit = Selling Price (SP) – Cost Price (CP)

= 115 – 85

= $ 30

Therefore, profit % = (Profit/Cost Price) × 100

= (30/85) x 100

= 35.29 %

Answers: 35.29 %

2. Mr. Brown bought a TV for $ 5800 and sold it for $ 7000. Find his profit or loss percent.

Solution:

Cost Price (CP) = $ 5800;

Selling Price (SP) = $ 7000

Since SP > CP,

Therefore, Mr. Brown makes a profit.

Profit = Selling Price (SP) – Cost Price (CP)

= 7000 – 5800

= $ 1200

Therefore, profit % = (Profit/Cost Price) × 100

= (1200/5800) x 100

= 20.69 %

Answers: 20.69 %

3. Robert bought pencils for $ 150.As they were of bad quality, he had to sell them for $ 127. Find his loss or gain percent.

Solution:

Cost Price (CP) = $ 150,

Selling Price (SP) = $ 127

Since SP < CP,

Therefore, Robert suffers a loss.

Loss = Cost Price (CP) − Selling Price (SP)

= 150 − 127

= $ 23

Therefore, loss % = (Loss/CP) × 100

= (23/150) × 100

= 15.33%

Answers: 15.33 %

4. Jack bought a pair of shorts for $ 125 and sold them for $ 108. Find his loss or gain percent.

Solution:

Cost Price (CP) = $ 125,

Selling Price (SP) = $ 108

Since SP < CP,

Therefore, Jack suffers a loss.

Loss = Cost Price (CP) − Selling Price (SP)

= 125 − 108

= $ 17

Therefore, loss % = (Loss/CP) × 100

= (17/125) × 100

= 13.6 %

Answers: 13.6 %

Worksheet on Profit and Loss

1. Find the profit or loss:

S. No.	Cost Price	Selling Price	Profit	Loss
(a)	$ 5000	$ 6000	$ 1000	……….
(b)	$ 12000	$ 10000	………	……….
(c)	$ 1800	$ 2400	………	……….
(d)	$ 5400	$ 7200	……….	……….
(e)	$ 9100	$ 8000	……….	……….
(f)	$ 6200	$ 6000	……….	……….
(g)	$ 3300	$ 4000	……….	……….
(h)	$ 1100	$ 1900	……….	……….

2. Fill in the blanks:

S. No.	Cost Price	Selling Price	Profit	Loss
(a)	$ 2400	…………	$ 400	…………
(b)	$ 1900	…………	………	$ 300
(c)	………	$ 2900	$ 100	………
(d)	………	$ 1590	………	$ 60
(e)	$ 4100	…………	$ 300	…………
(f)	$ 1200	…………	…………	$ 180
(g)	………	$ 1450	$ 45	…………
(h)	………	$ 5900	…………	$ 490

Word Problems on Profit and Loss

3. A ring was bought for $ 18,950 and sold at a loss of $ 4780. Find the selling price.

4. A secondhand car was sold for $ 19,000, at a loss of $ 85. Find the CP of the car.

5. Jane sold her antique watch for $ 20,000 at a profit of $ 1737. Find the CP of watch.

6. Abraham bought a music system for $ 6375.00 and spent $ 75.00 on its transportation He sold it for $ 6400.00. Find his profit or loss percent.

7. Joy bought 12 pens at $ 120 a dozen. He sold them for $ 15 each. What is his profit percent?

8. Sally bought a desk for $ 900. She sold it at a profit of 20%. How much profit did she make? What is the selling price?

9. Find the selling price if the cost price is $ 1200 and loss percent is 25.

10. Marshall bought 20 ink cartridges and sold them at $ 4 each. If it had cost $ 50 for the ink cartridges, what was his profit or loss percent?

11. Mr. Smith buys pencils at $ 250 per hundred and sells each at $ 1.75. Find his loss or profit.

12. Davis bought a secondhand cycle for $ 500. He spent $ 80 in repairs and $ 175 in repainting. He then sold it to John for $ 900. How much did he gain or lose?

13. A fruit vendor bought 600 specialty apples for $ 4800. He spent $ 400 on transportation. How much should he sell each to get a profit of $ 1000?

14. Tim bought a case of chocolates for $ 650 and sold it to Tom at a profit of $ 75. Find the selling price.