Unit 7 · Profit and Loss

HARDER PRACTICE QUESTIONS · ANSWER KEY

Full marks 33

Give the marks for the points in the marking scheme; an answer in other words that says the same is right.

1 Spot the error

ANSWER U · 3

i. He took 10% of the **selling** price. The 10% is of the cost price, which is not known yet.

ii. S.P. is 110% of C.P.: $\frac{110}{100} \times x = 8800$, so $x = \frac{8800 \times 100}{110} =$ **Rs 8,000**.

iii. 10% of 8,000 is 800, and 8000 + 800 = 8800 ✓. (His Rs 7,920 gives 7920 + 792 = 8712, not 8,800.)

MARKING SCHEME

- ✓ i. The 10% is of the C.P., not the S.P.
- ✓ ii. Rs 8,000.
- ✓ iii. Checked: 8,000 + 800 = 8,800.

2 Copy and complete

ANSWER A · 4

Cost price (Rs)	Selling price (Rs)	Profit or loss
2,400	**2,760**	profit 15%
3,600	3,060	loss 15%
750	**660**	loss 12%
5,000	5,750	profit 15%

Row 1: $2400 + \frac{15}{100} \times 2400 = 2760$. Row 2: S.P. is 85% of C.P., $3060 \times \frac{100}{85} = 3600$. Row 3: $750 - \frac{12}{100} \times 750 = 660$. Row 4: S.P. is 115% of C.P., $5750 \times \frac{100}{115} = 5000$.

MARKING SCHEME

- ✓ Row 1: 2,760.
- ✓ Row 2: 3,600.
- ✓ Row 3: 660.
- ✓ Row 4: 5,000.

3 Apples from Jumla

ANSWER A · 4

i. $40 \times 180 + 800 = 7200 + 800 =$ **Rs 8,000**. The carrying is part of the cost.

ii. S.P. $= 40 \times 230 = 9200$. Profit $= 9200 - 8000 = 1200$. Profit percent $= \frac{1200}{8000} \times 100\% =$ **15%**.

iii. S.P. for 20% $= 8000 + \frac{20}{100} \times 8000 = 9600$, and $9600 \div 40 =$ **Rs 240 a kilogram**.

MARKING SCHEME

- ✓ i. Rs 8,000, carrying included.
- ✓ ii. Profit Rs 1,200.
- ✓ ii. 15%.
- ✓ iii. Rs 240 a kilogram.

4 From the factory to you

ANSWER

i. Rs 1,500 is 125% of the shopkeeper's cost: $1500 \times \frac{100}{125} =$ **Rs 1,200**.

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ii. Rs 1,200 is 120% of the factory's cost: $1200 \times \frac{100}{120} =$ **Rs 1,000**. HA · 4

iii. **No.** She paid $1500 - 1000 = 500$ more, and $\frac{500}{1000} \times 100\% =$ **50%**. The 25% was taken on Rs 1,200, which already had the factory's 20% in it.

MARKING SCHEME

- ✓ i. Rs 1,200.
- ✓ ii. Rs 1,000.
- ✓ iii. Rs 500 more than the cost of making it.
- ✓ iii. 50%, not 45%.

5 One radio, two prices

ANSWER A · 3

C.P. $= 3450 \times \frac{100}{115} =$ Rs 3,000. At Rs 2,850 the seller gets less than Rs 3,000: a loss of $3000 - 2850 = 150$. Loss percent $= \frac{150}{3000} \times 100\% =$ **5% loss**.

MARKING SCHEME

- ✓ C.P. Rs 3,000.
- ✓ A loss of Rs 150.
- ✓ 5% loss.

6 Two ways to say it

ANSWER HA · 4

i. Profit $= \frac{20}{100} \times 4000 =$ **Rs 800**; C.P. $= 4000 - 800 =$ **Rs 3,200**.

ii. S.P. is 125% of C.P.: $4000 \times \frac{100}{125} =$ **Rs 3,200**; profit **Rs 800**.

iii. **Neither**: both made Rs 800 on a cost of Rs 3,200. They said the same thing in two ways.

iv. $\frac{800}{3200} \times 100\% =$ **25%**. A profit percent on the selling price looks smaller than the same profit on the cost price.

MARKING SCHEME

- ✓ i. Rs 800 and Rs 3,200.
- ✓ ii. Rs 3,200 and Rs 800.
- ✓ iii. The same profit.
- ✓ iv. 25%.

7 Two phones

ANSWER A · 4

i. $15000 + 3000 =$ **Rs 18,000** and $15000 - 1800 =$ **Rs 13,200**.

ii. Total S.P. = 31200, total C.P. = 30000: a **profit of Rs 1,200**.

iii. $\frac{1200}{30000} \times 100\% =$ **4%**, not 8%. The 20% and the 12% are each of only half the money, so together they give half of 8%.

MARKING SCHEME

- ✓ Rs 18,000 and Rs 13,200.
- ✓ A profit of Rs 1,200.
- ✓ 4%.
- ✓ Not 8%, with a reason.

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8 Make your own

ANSWER A · 3

For example:

i. C.P. Rs 2,500: profit of 12% gives 2500 + 300 = Rs 2,800; loss of 8% gives 2500 − 200 = Rs 2,300.

ii. "A shopkeeper buys a fan for Rs 3,000 and sells it for Rs 2,400. Find the profit or loss percent."

Loss = 600, and $\frac{600}{3000} \times 100\% = 20\%$.

Any correct answers are right.

MARKING SCHEME

- ✓ i. The S.P. for a 12% profit.
- ✓ i. The S.P. for an 8% loss.
- ✓ ii. A question with a 20% loss, checked.

9 Think: counted in pens

ANSWER HA · 4

i. The profit is the cost of 3 pens on a cost of 12 pens: $\frac{3}{12} \times 100\% = \mathbf{25\%}$.

ii. C.P. = S.P. + Loss, so the C.P. of 12 pens is the S.P. of 12 pens plus the S.P. of 2: the S.P. of **14 pens**.

iii. The loss is 2 pens' S.P. out of a cost of 14 pens' S.P.: $\frac{2}{14} \times 100\% = \frac{100}{7}\% = \mathbf{14\frac{2}{7}\%}$, about 14.3%.

MARKING SCHEME

- ✓ i. 3/12 of the C.P.
- ✓ i. 25%.
- ✓ ii. 14 pens.
- ✓ iii. $14\frac{2}{7}\%$.

Marks by level	Knowledge	Understanding	Application	Higher ability	Total
Marks	0	3	18	12	**33**

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