Percentage Profit and Loss

Practice Worksheet (Non-Calculator)

I Do

Dom buys a vintage watch for £160.

He sells the watch for £184.

Work out Dom's percentage profit.

.....%

(Total for Question is 2 marks)

We Do

Zoe buys a winter coat for £80.

She sells the coat for £108.

Work out Zoe's percentage profit.

.....%

(Total for Question is 2 marks)

You Do 1

John buys a bicycle for £240.

He sells the bicycle for £300.

Work out John's percentage profit.

.....%

(Total for Question is 2 marks)

You Do 2

Paige buys a painting for £125.

She sells the painting for £155.

Work out Paige's percentage profit.

.....%

(Total for Question is 2 marks)

You Do 3

Keeley buys a guitar for £250.

She sells the guitar for £215.

Work out Keeley's percentage loss.

.....%

(Total for Question is 2 marks)

Challenge 1

Ryan buys a box of 40 bottles of water for £16.

He sells all 40 bottles for 55p each.

Work out Ryan's percentage profit.
Show all of your working clearly.

.....%

(Total for Question is 3 marks)

Challenge 2

Katie buys 30 notebooks for a total cost of £75.

She sells 20 of the notebooks for £4 each.
She reduces the price of the remaining notebooks by 30% and sells all of them.

Work out Katie's overall percentage profit.
Show all of your working clearly.

.....%

(Total for Question is 4 marks)

Extreme Challenge

Tom buys a classic car and spends £400 repairing it.

He then sells the car for £4,320, making a 20% profit on his total outlay (the buying price plus the repair cost).

Work out the percentage profit Tom would have made on the buying price alone if he had not needed to pay for any repairs and had still sold the car for £4,320.
You must show all of your working clearly.

.....%

(Total for Question is 5 marks)

Worked Answers

I Do (Dom)
Profit $= £184 - £160 = £24$.
Percentage profit $= \frac{24}{160} \times 100\% = \frac{3}{20} \times 100\% = 3 \times 5\% =$ **15**%.

We Do (Zoe)
Profit $= £108 - £80 = £28$.
Percentage profit $= \frac{28}{80} \times 100\% = \frac{7}{20} \times 100\% = 7 \times 5\% =$ **35**%.

You Do 1 (John)
Profit $= £300 - £240 = £60$.
Percentage profit $= \frac{60}{240} \times 100\% = \frac{1}{4} \times 100\% =$ **25**%.

You Do 2 (Paige)
Profit $= £155 - £125 = £30$.
Percentage profit $= \frac{30}{125} \times 100\% = \frac{6}{25} \times 100\% = 6 \times 4\% =$ **24**%.

You Do 3 (Keeley)
Loss $= £250 - £215 = £35$.
Percentage loss $= \frac{35}{250} \times 100\% = \frac{7}{50} \times 100\% = 7 \times 2\% =$ **14**%.

Challenge 1 (Ryan)
Total revenue $= 40 \times £0.55 = £22$.
Profit $= £22 - £16 = £6$.
Percentage profit $= \frac{6}{16} \times 100\% = \frac{3}{8} \times 100\% =$ **37.5**%.

Challenge 2 (Katie)

1. Revenue from the first 20 notebooks:
$20 \times £4 = £80$.
2. Reduced price for the remaining 10 notebooks:
30% of $£4 = 3 \times £0.40 = £1.20$.
New price $= £4 - £1.20 = £2.80$.
3. Revenue from the remaining 10 notebooks:
$10 \times £2.80 = £28$.
4. Total revenue and profit:
Total revenue $= £80 + £28 = £108$.
Profit $= £108 - £75 = £33$.
5. Percentage profit:
$\frac{33}{75} \times 100\% = \frac{11}{25} \times 100\% = 11 \times 4\% =$ **44**%.

Extreme Challenge (Tom)

1. Find Tom's total outlay (reverse percentage):
Selling price of £4,320 represents 120% of his total outlay.
$120\% = £4,320$
Divide by 12: $10\% = £360$
Multiply by 10: $100\% = £3,600$ (total outlay).
2. Find the original buying price of the car:
Buying price $= £3,600 - £400 = £3,200$.
3. Calculate the profit without repairs:
Profit $= £4,320 - £3,200 = £1,120$.
4. Calculate the percentage profit on the buying price:
$\frac{1120}{3200} \times 100\% = \frac{112}{320} \times 100\% = \frac{7}{20} \times 100\% = 7 \times 5\% =$ **35**%.