Percentage increase/decrease

6 questions | 13 marks

Equivalent correct methods earn the corresponding marks.

1. Increase 80 by 10%. [2 marks]

$10\% \times 80 = 8$.

$80 + 8 = 88$.

Answer: 88

2. Decrease 150 by 20%. [2 marks]

The multiplier is 0.80.

$150 \times 0.80 = 120$.

Answer: 120

3. A quantity rises from 50 to 65. Find the percentage increase. [2 marks]

The change is $65 - 50 = 15$.

$15 \div 50 \times 100\% = 30\%$.

Answer: 30%

4. A fare falls from 40 AUD to 34 AUD. Find the percentage decrease. [2 marks]

The reduction is $40 - 34 = 6$ AUD.

$6 \div 40 \times 100\% = 15\%$.

Answer: 15%

5. Increase 160 by 12.5%. [2 marks]

$12.5\% = \frac{1}{8}$.

$160 \div 8 = 20$, so $160 + 20 = 180$.

Answer: 180

6. A 100 AUD price rises by 20%, then falls by 20%. Find the final price and explain why it is not 100 AUD. [3 marks]

The increased price is $100 \times 1.2 = 120$.

The reduced price is $120 \times 0.8 = 96$.

The rise is 20 AUD but the reduction is 24 AUD.

Answer: 96 AUD; the reduction uses 120 AUD as its whole.