Multi-step equations

6 questions | 13 marks

Equivalent correct methods earn the corresponding marks.

1. Solve $2x + 5 = 17$. [2 marks]

Subtract 5 to get $2x = 12$.

Divide by 2; check $12 + 5 = 17$.

Answer: $x = 6$.

2. Solve $5x - 4 = 26$. [2 marks]

Add 4 to get $5x = 30$.

Divide by 5.

Answer: $x = 6$.

3. Solve $7 + 3x = 1$. [2 marks]

Subtract 7 to get $3x = -6$.

Divide by 3 and check.

Answer: $x = -2$.

4. Solve $6x + 4 - 2x = 24$. [2 marks]

Collect terms: $4x + 4 = 24$.

Subtract 4 and divide by 4.

Answer: $x = 5$.

5. Solve $\frac{x}{3} + 4 = 9$. [2 marks]

Subtract 4: $\frac{x}{3} = 5$.

Multiply by 3.

Answer: $x = 15$.

6. Bike hire costs AUD 6 plus AUD 4 per hour. The bill is AUD 26. Write and solve an equation for the hours. [3 marks]

Remove the fixed charge: $4h = 20$.

Divide by 4 and check $6 + 4(5) = 26$.

Answer: $6 + 4h = 26$; 5 hours.