Linear equations and formulas

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Solve $4x + 9 = 37$. [2 marks]

Subtract 9: $4x = 28$.

Divide by 4.

Answer: $x = 7$.

2. Solve $7 - 2x = -5$. [2 marks]

Subtract 7: $-2x = -12$.

Divide by -2.

Answer: $x = 6$.

3. Solve $3(x + 2) = 21$ and check. [2 marks]

Divide by 3: $x + 2 = 7$.

Subtract 2; $3(5 + 2) = 21$.

Answer: $x = 5$.

4. Make h the subject of $A = \frac{bh}{2}$, where $b \neq 0$. [2 marks]

Multiply both sides by 2.

Divide the entire expression $2A$ by b.

Answer: $h = \frac{2A}{b}$.

5. Use $C = 18 + 6n$ to find the cost for five items. [2 marks]

$C = 18 + 6(5) = 48$.

Answer: 48 dollars.

6. A tank has $V = 150 - 12t$ litres after t minutes. When does it hold 90 L? [2 marks]

$90 = 150 - 12t$ gives $12t = 60$.

Thus $t = 5$.

Answer: 5 min.