Straightforward two-step equations

6 questions | 18 marks

Equivalent correct methods earn the corresponding marks.

1. Solve $2x + 5 = 19$. [3 marks]

Subtract 5: $2x = 14$.

Divide by 2: $x = 7$.

Check: $2 \times 7 + 5 = 19$.

Answer: $x = 7$

2. Solve $4n - 9 = 19$. [3 marks]

Add 9: $4n = 28$.

Divide by 4: $n = 7$.

Check: $4 \times 7 - 9 = 19$.

Answer: $n = 7$

3. Solve $\frac{p}{3} + 4 = 10$. [3 marks]

Subtract 4: $p \div 3 = 6$.

Multiply by 3: $p = 18$.

Check: $18 \div 3 + 4 = 10$.

Answer: $p = 18$

4. Solve $\frac{b}{4} - 3 = 5$. [3 marks]

Add 3: $b \div 4 = 8$.

Multiply by 4: $b = 32$.

Check: $32 \div 4 - 3 = 5$.

Answer: $b = 32$

5. Solve $2(t + 4) = 26$. [3 marks]

Divide by 2: $t + 4 = 13$.

Subtract 4: $t = 9$.

Check: $2(9 + 4) = 26$.

Answer: $t = 9$

6. A student writes $3m + 6 = 24$, then $3m = 30$. Explain the error and solve correctly. [3 marks]

To undo adding 6, subtract 6 from both sides.

$3m = 18$, so $m = 6$.

Check: $3 \times 6 + 6 = 24$.

Answer: $m = 6$; subtract 6 rather than add it.