Equation-solving consolidation

6 questions | 13 marks

Equivalent correct methods earn the corresponding marks.

1. Solve $6x + 5 = 29$. [2 marks]

Subtract 5: $6x = 24$.

Divide by 6: $x = 4$.

Answer: $x = 4$

2. Solve $8x - 7 = 3x + 18$. [2 marks]

Subtract $3x$: $5x - 7 = 18$.

Add 7 and divide by 5.

Answer: $x = 5$

3. Solve $3(x + 4) = 27$. [2 marks]

Divide by 3: $x + 4 = 9$.

Subtract 4.

Answer: $x = 5$

4. Solve $5 - 2(x - 1) = 13$. [2 marks]

Expand: $7 - 2x = 13$.

Subtract 7: $-2x = 6$.

Divide by -2.

Answer: $x = -3$

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

Multiply by 3: $x + 5 = 12$.

Subtract 5.

Answer: $x = 7$

6. A number is multiplied by 4 and then 9 is subtracted. The result equals twice the number plus 7. Find the number. [3 marks]

Let the number be x. Then $4x - 9 = 2x + 7$.

Subtract $2x$ and add 9: $2x = 16$.

Thus $x = 8$.

Answer: 8