

Lesson 6-6 • Apply Day

Reinforce Understanding

Testing Equivalence by Substituting

I can show that two expressions are equivalent by simplifying and combining like terms.

Worked model

Are $2(y + 7)$ and $2y + 14$ equivalent? Test them using $y = 9$.

1. Pick the test value. $y = 9$
2. Substitute into the first expression. $2(9 + 7) = 2 \times 16 = 32$
3. Substitute into the second expression. $2 \times 9 + 14 = 18 + 14 = 32$
4. Compare the two values. 32 and 32 match.

Answer: Both expressions give 32, so they are equivalent.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Simplify $4x + 2x + 5$.

Complete each step, then write the final answer.

1. Add the x-coefficients: $4 + 2 = \underline{\hspace{1cm}}$.
2. Keep the constant term and write: $\underline{\hspace{1cm}}$.

Answer: $\underline{\hspace{2cm}}$

2. Simplify $5x + 3x + 7$.

Complete each step, then write the final answer.

1. Add the x-coefficients: $5 + 3 = \underline{\hspace{1cm}}$.
2. Keep the constant term and write: $\underline{\hspace{1cm}}$.

Answer: $\underline{\hspace{2cm}}$

3. Simplify $6x + 4x + 9$.

Complete each step, then write the final answer.

1. Add the x-coefficients: $6 + 4 = \underline{\hspace{1cm}}$.
2. Keep the constant term and write: $\underline{\hspace{1cm}}$.

Answer: $\underline{\hspace{2cm}}$