Simplifying Polynomial Expressions

Name:

Date:

Vocabulary Review:
In your own words, define each of the following vocabulary terms.

- Polynomial

- Distributive Property

Apply New Learning:

1. What strategies can be used to simplify polynomials?

2. Rewrite the polynomial $5x + 7 - 11x$ in simplified form by combining the like terms.

3. Rewrite the polynomial $x^2 - 4x + 7 - 2x$ in simplified form by combining the like terms.

4. Rewrite the polynomial $5x^3 - 2x^2 + 14x + 7x^2 + 3x - 11$ in simplified form by combining the like terms.

5. A triangle has three sides with the following lengths: $2x + 1$ units, $3x + 5$ units, and $4x - 1$ units. Write a simplified algebraic expression for the perimeter of the triangle.

6. A triangle has three sides. The first side has a length of *x*. The second side has a length that is 12 more units than the first side. The third side has an identical length to the first side. Write a simplified algebraic expression in terms of *x* for the perimeter of the triangle.

7. A rectangle has a length of 6 units and a width of 3 units. If its length and width are increased by different unknown amounts (named *x* and *y*, respectively), then write a simplified algebraic expression for the perimeter of the new rectangle formed in terms of *x* and *y*.