Name _____ Date _____ Class _____

LESSON 10-3

# Generating Equivalent Expressions

## *Practice and Problem Solving: A/B*

**Justify each step used to simplify the expression.**

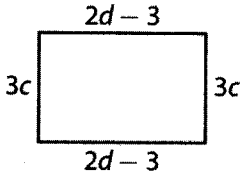
1. $3x + 2y - 2x + 2 = 3x - 2x + 2y + 2$ _____
2. $= (3x - 2x) + 2y + 2$ _____
3. $= (3 - 2)x + 2y + 2$ _____
4. $= x + 2y + 2$ _____

**Simplify.**

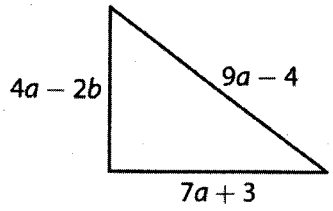
5. $3r + n^2 - r + 5 - 2n + 2$ _____
6. $8v + w + 7 - 8v + 2w$ _____
7. $4c^2 + 6c - 3c^2 - 2c - 3$ _____
8. $z^3 + 5z + 3z^2 + 1 - 4 - 2z^2$ _____

**Write and simplify an expression for the perimeter of each figure.**

9.




10.




_____ _____

11. A square has sides of $10x$. Write and simplify an expression for the perimeter of that square.

_____

12. A rectangle has a length of $2x + 7$ and a width of $3x + 8y$. Write and simplify an expression for the perimeter of that rectangle.

_____

13. In the space at the right, draw a triangle. Use an algebraic expression to label the length of each side. Write an expression for the perimeter of your triangle. Then simplify that expression.

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