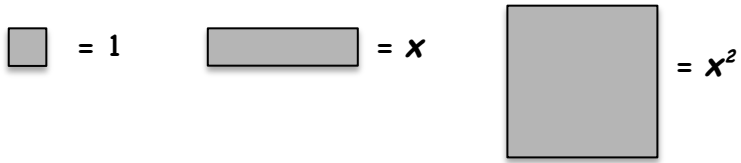


Introductions to Algebra Tiles

Name:

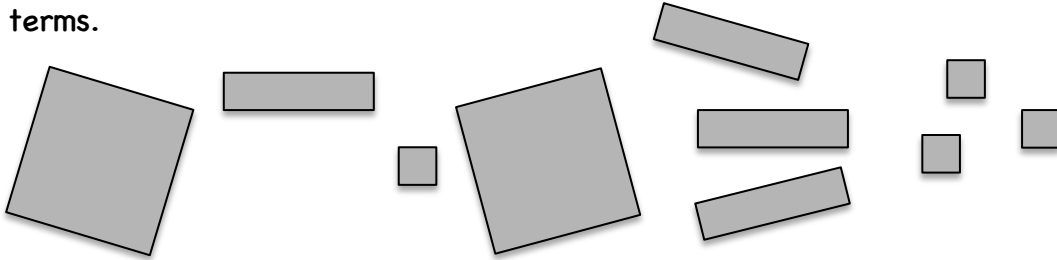
Date:

Period:



The "names" of algebra tiles are used to represent algebraic expressions, and gives opportunities practice in combining like terms. A very non-technical definition of the word *terms* is, "The things being added." **Combining like terms** is the process of writing an expression (or equation) more simply by collecting (adding together) the parts of the expression (or equation) that are "the same."

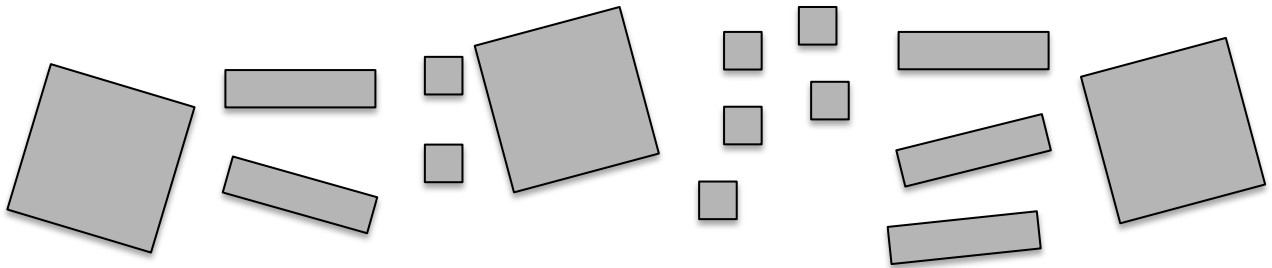
- Write an algebraic expression for the following collection of algebra tiles as they appear (from left to right). Then rewrite the expression by combining like terms.



Expression as they appear (from left to right):

Expression with like terms combined:

-

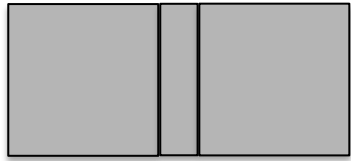


Expression as they appear (from left to right):

Expression with like terms combined:

Algebra tiles are sometimes used to pose perimeter problems, which give practice in combining like terms

Example:



The perimeter of the shape made by these three tiles could be written as:

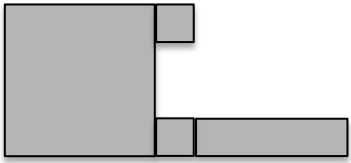
$$3x + 1 + 3x + 1$$

(Three sides of length x from one of the x^2 tile, a single unit from the top of the x tile, another three sides of length x from the other x^2 tile, and another single unit from the bottom of the x tile.)

The expression representing the perimeter could be simplified:

$$\begin{aligned} 3x + 1 + 3x + 1 \\ = 6x + 2 \end{aligned}$$

3.



Write an algebraic expression that represents the perimeter of the shape made from the algebra tiles. Then, simplify the expression. Show and/or explain how you determined the expression.

4.



Write an algebraic expression that represents the perimeter of the shape made from the algebra tiles. Then, simplify the expression. Show and/or explain how you determined the expression.