

Math 9

Name: _____

5.2 – Simplifying Polynomials using Like Terms & Zero Pairs

Date: _____

Two terms are **like terms** if they both have: i) the same **letter** as the variable,
and ii) the variables have the same **exponent**.

Two **Algebra Tiles** are considered “like” if they have the **same size**.

Ex. 1 a. $x^2 + x^2 + x^2$

b. $x^2 + 2x^2 + 5x^2$

c. $2t + t$

d. $7 + 8 + 2$

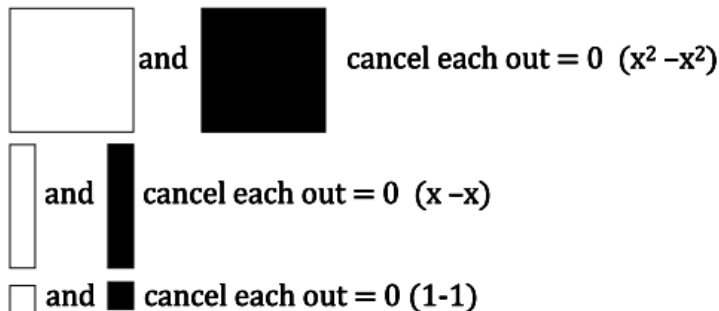


g. $x^2 + t^2$

h. $3t + 7$

ZERO PAIRS are: i) a pair of *Algebra Tiles* that are “like” (same size) but are **OPPOSITE SIGNS**.
ii) a pair of **like terms** with the **same coefficient** but **OPPOSITE SIGNS**.

Zero Pairs always add to ZERO!!!



Ex. 2 a. Simplify the following *Algebra Tile* model, using the concept of *Zero Pairs*.



b. Write the simplified model in algebraic form:

c. Simplify the above model using algebra only:

Ex. 3 Simplify the following algebraic expressions using the idea of *Zero Pairs*.

a. $4n^2 - 1 - 3n - 3 + 5n - 2n^2 =$

b. $14x^2 - 11 + 30x + 3 + 15x - 25x^2 =$

c. $2m + 4 - 3m - 8 =$

d. $3d - d^2 - 4d - 5 - 6 + d^2 =$

e. $c + 4 - 4c + 5 =$

Ex. 4 Determine the perimeter of the following rectangle in terms of the variable, x .

