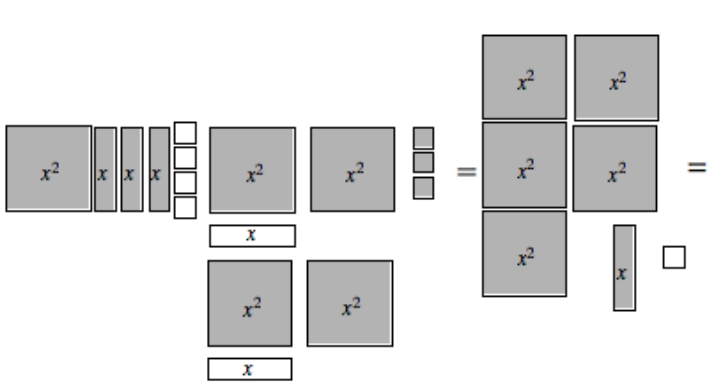
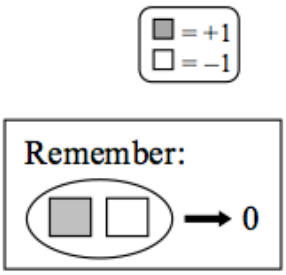
Name _____ Math _____ Class ____

Simplifying Expressions

Like terms are two or more terms that are exactly the same except for their coefficients. That is, they have the same variable(s), with corresponding variable(s) raised to the same power. Like terms can be combined into one quantity by adding and/or subtracting the coefficients of the terms. Terms are usually listed in the order of decreasing powers of the variable. Combining like terms, one way of simplifying expressions, using algebra tiles is shown in the first two examples.

Simplify $x^2 + 3x - 4 + 2(2x^2 - x) + 3$





$$-3x^2 - 2x + 5 + 4x^2 - 7x + 6$$

$$(-3x^2 + 4x^2) + (-2x - 7x) + (5 + 6)$$

$$x^2 - 9x + 11$$

Here are some more to try.

1. $(x^2 + 3x + 4) + (x^2 + 3x + 2)$
3. $2x^2 + 2x - 1 + x^2 - 4x + 5$
5. $2x^2 + 4x + (-3) + x^2 - 3x + 5$
7. $-4x^2 + 2x + 8 - 3x^2 + 5x - 3$
9. $3(5x^2 + 4x) - 7 + 2x + 3$
11. $-2(3x^2 - x + 2) + 3x - 1$
13. $2x^2 - 3(x - 3) + 5x^2 - 4x$
15. $(x^2 + 3x + 2) - (x^2 - 3x - 2)$
17. $(5x + 6) - (x^2 - 5x + 6)$
19. $3c + 4a - 7c + 5b - (-4a) + 7$