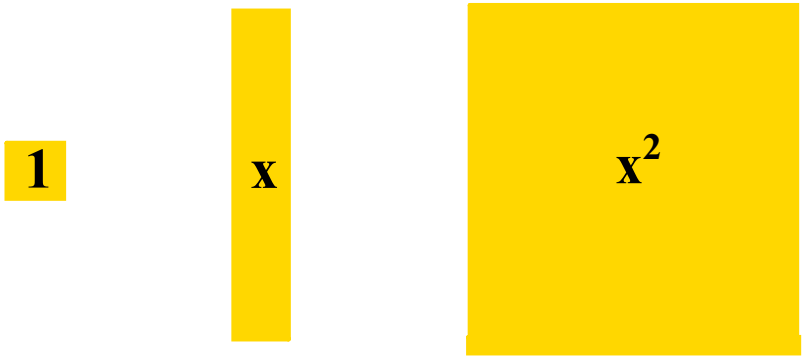
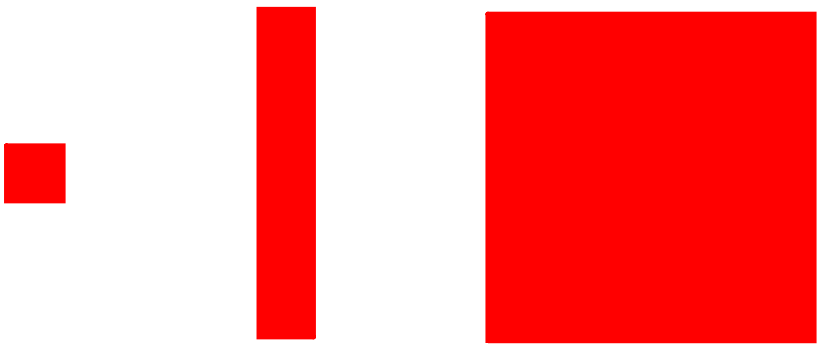
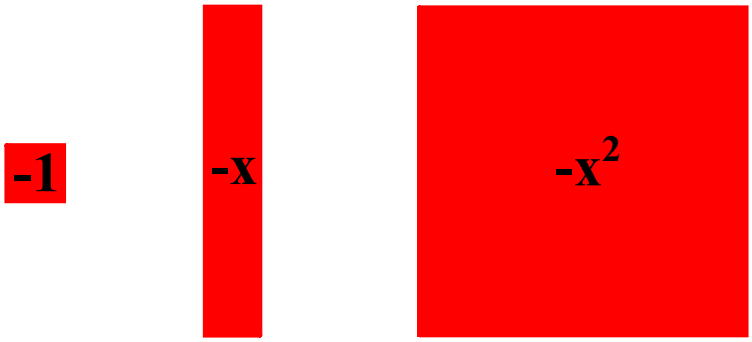

INTRODUCTION TO
ALGEBRA TILES:


1
x
x^2





We often use the variable "x" in math, but algebra tiles can be used to represent ANY variable:

ex: $a^2 + 3a - 4$

Which of these polynomials can be represented by the same algebra tiles?

a) $3x^2 - 5x + 6$ b) $-5 + 6r + 3r^2$ c) $-5m + 6 + 3m^2$

a) $3x^2 - 5x + 6$

Use three x^2-tiles, five $-x$-tiles, and six 1-tiles.

b) $-5 + 6r + 3r^2$

Use five -1-tiles, six r-tiles, and three r^2-tiles.

c) $-5m + 6 + 3m^2$

Use five $-m$-tiles, six 1-tiles, and three m^2-tiles.

In parts a and c, the same algebra tiles are used.

Two polynomials are EQUIVALENT if they can be represented by identical algebra tiles; therefore, $3x^2 - 5x + 6$ and $-5m + 6 + 3m^2$ are equivalent polynomials.

a) Which polynomial does each group of algebra tiles represent?

Model A

$2x^2 - 8x + 2$

Model B

$2a^2 - 8a + 2$

Model C

$-4r + 6$

b) Which of the polynomials in part a are equivalent? How do you know?

Both models A and B contain the same tiles.
So, $2x^2 - 8x + 2$ and $-8x + 2x^2 + 2$ are equivalent polynomials.

Use algebra tiles to model each polynomial.

Is the polynomial a monomial, binomial, or trinomial? Explain.

a) $-2x^2$ b) $2b^2 - b + 4$ c) $5a - 3$

a) To represent $-2x^2$, use two $-x^2$-tiles.
Since there is only one type of tile,
$-2x^2$ is a monomial.

b) To represent $2b^2 - b + 4$, use two b^2-tiles,
one $-b$-tile, and four 1-tiles.
Since there are 3 types of tiles,
$2b^2 - b + 4$ is a trinomial.

c) To represent $5a - 3$, use five a-tiles
and three -1-tiles. Since there are 2 types
of tiles, $5a - 3$ is a binomial.

CONCEPT REINFORCEMENT:

***MMS 9*:**

Page 214: #8, 11 and 12
Page 215: #13, 15 and 16
Page 216: #18, 19 and 20

Pg 214

8. a) x^2+3x-4 ✓ d) $-4+r^2+3r$

b) $-3+4n-n^2$ ✓ f) $-h^2-3+4h$

c) $4m-3+m^2$ →

e) $-3m^2+4m-3$ →