

## WARM UP: Algebra Tiles

Show the following using algebra tiles:

$$1. \ 5 - 2 = +3 \quad \left. \vphantom{5 - 2} \right\} \text{Same!}$$

$$2. \ 5 + (-2) = +3$$

$$3. \ 4x - 3x = 1x \quad \left. \vphantom{4x - 3x} \right\} \text{Same!}$$

$$4. \ 4x + (-3x) = 1x$$

$$5. \ + (2x^2 + 4x + 5) - (x^2 + 2x + 3) = 2x^2 + 4x + 5 - x^2 - 2x - 3$$

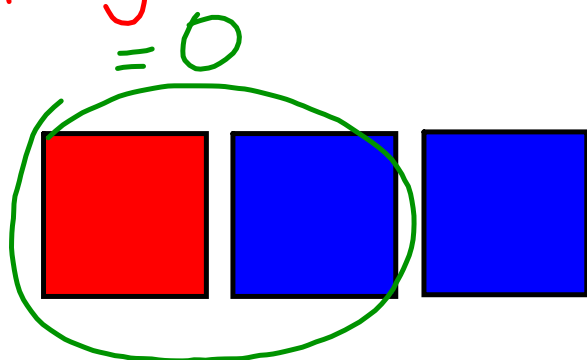
$$6. \ + (2x^2 + 4x + 5) + (-x^2 - 2x - 3) = x^2 + 2x + 2 \quad \left. \vphantom{+ (2x^2 + 4x + 5)} \right\} \text{Same!}$$

What is the pattern you notice?

Subtracting is the same as  
***adding the opposite!***

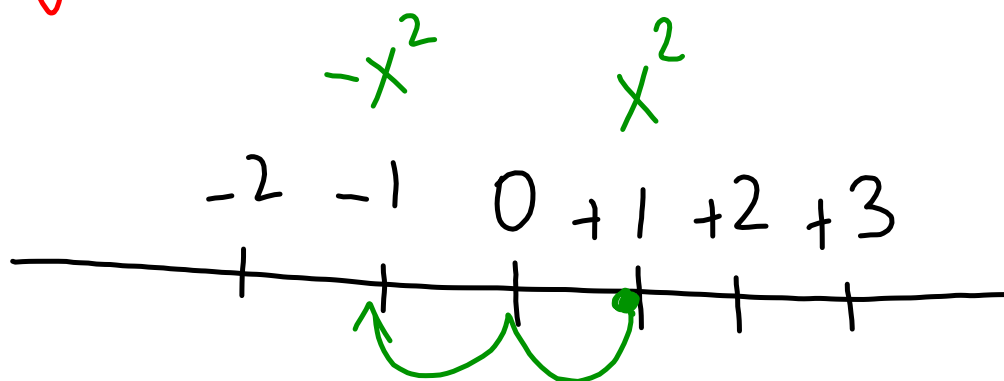
Ex:  $1x^2 - 2x^2$

1) Algebra Tiles:



$$\therefore 1x^2 - 2x^2 = -1x^2$$

2) Number Line:



$$\begin{array}{r} x^2 \\ -2x^2 \\ \hline -1x^2 \end{array}$$

$$\therefore 1x^2 - 2x^2 = -1x^2$$

## TRY IT: Using Algebra Tiles to Subtract Polynomials

1. Show the following using algebra tiles. Write the simplified polynomial on your whiteboard.

① $(3x^2 + 2x + 3) - (2x^2 + x + 2)$	
② $(-4x^2 + 2x) - (x^2 + 2x + 1)$	
③ $(-2x^2 + x + 1) - (2x^2 - 2x + 1)$	

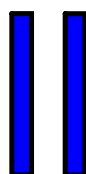
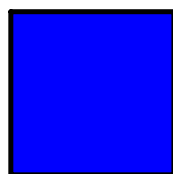
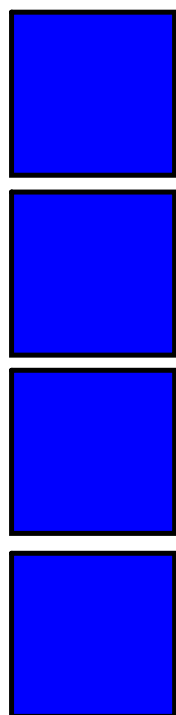
④ 2. The following polynomial is the answer to a subtraction problem. What are two polynomials that may have been subtracted to get this answer?

$$-3x^2 + 4x - 2$$

#2.

$$(-4x^2 + 2x) - (x^2 + 2x + 1)$$

$$-x^2 - 2x - 1$$

add  
the  
opposite!

$$= -5x^2 - 1$$

