Date: _____

Learning Goal

Expanding Binomials

Multiply these two binomials (**expand**)

$$(x - 4)(x + 3)$$

Expand.

$$(x + 4)^2$$

Expand.

$(x - 3)^2$

Expand.

$$y = 3(x - 2)^2$$

Expand.

$$y = -2(x + 5)^2$$

Expand.

$$y = 2(x + 1)^2 - 5$$

Expand.

$$y = 0.5(x + 2)^2 - 2$$

Expand.

$$y = -0.25(x + 4)^2 + 7$$

Standard Form Equations

Last unit we dealt with lots of quadratics (parabolas) in **vertex form**

Vertex Form: $y = a(x - h)^2 + k$

This unit we are going to look at quadratics in **standard form** as well!

Standard Form: $y = ax^2 + bx + c$

As you have seen, we can get from Vertex Form to Standard Form by

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Standard Form Equations

standard form: $y = ax^2 + bx + c$

What does the *c* in the *standard form equation* tell us?

Converting from Vertex Form to Standard Form

1. Change the **(x - h)²** part of the

vertex form equation to

_____.

2. _____ **(x - h)(x - h)**

into a new set of brackets using

_____ or _____.

3. _____ through the

new set of brackets by ____.

4. Collect _____ and

simplify.

Write each in standard form.
State the vertex and y-intercept for each.

1. $y = (x + 6)^2$

2. $y = (x - 1)^2$

3. $y = 3(x + 9)^2$

4. $y = -0.25(x + 8)^2$

5. $y = (x - 8)^2 + 3$

6. $y = 5(x - 4)^2 + 12$

7. $y = 2(x + 5)^2 - 10$

8. $y = 0.5(x - 6)^2 - 11$