ALGEBRA II
Chapter 4 section 7
Complete the Square
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FOCUS:
How is the process of completing the square used to solve quadratic equations?

VOCAB:
*Completing the Square:*_____

_____

WARM – UP:

Solve the equation.

1. $(x - 5)^2 = 49$_____ 2. $(x + 6)^2 = 20$_____

Factor the expression.

3. $x^2 + 18x + 81$_____ 4. $x^2 - 22x + 121$_____

5. 27 plus some number is 6^2. What is that number? _____

NOTES:

Solve the equation by finding square roots.

$x^2 + 6x + 9 = 36$ $x^2 + 20x + 100 = 81$

Find the value of c that makes the expression a perfect square trinomial. Then write the expression as the square of a trinomial.

$x^2 - 26x + c$ $x^2 + 9x + c$

Solve by completing the square.

$x^2 - 10x + 1 = 0$

$x^2 - 10x + 8 = 0$

$2n^2 - 4n - 14 = 0$

$3x^2 - 36x + 150 = 0$

$6x(x + 8) = 12$

$4p(p - 2) = 100$

Write the equation in vertex form. Then identify the vertex.

$y = x^2 + 18x + 95$

$y = x^2 - 8x + 17$

The height y (in feet) of a ball that was thrown up in the air from the roof of a building after t seconds is given by the function $y = -16t^2 + 64t + 50$. Find the maximum height of the ball.

Let's see if you comprehended what we worked on in class…

Try _____ for homework