

Name: _____
Date: _____
Class: _____

Algebra
Unit 10
HW 10-6

1) State the vertex of both equations and what you notice about them:

$y = (x-3)^2 + 2$ and $y = x^2 - 6x + 11$.

2) Place the following equation into vertex form: $y = x^2 - 4x - 1$

3) Place the following equation into vertex form: $y = x^2 - 10x + 27$

4) Get each into vertex form and describe the shift that would move the first equation to the second equation: $y = x^2 + 5x + 4$ and $y = x^2 - 9x - 2$

5) Solve: $2x - 108 + x^2 = 1364 + 50x - 2x^2$

6) Solve: $f(x) = 192 - 8x - 3x^2$ when $f(x) = 40$.

7) Describe all the transformations $g(x) = x^2$ would go through to become $f(x) = -3(x - 6)^2 + 14$.