

**Quadratics PRACTICE:** Using the vertex form,  $y = a(x - h)^2 + k$

Name: \_\_\_\_\_

Graph each equation using a method of your choice (technology, table of values, etc.)  
Write the point that represents the vertex and y-intercept. Write the equation in standard form.  
List the transformations specifically. Ex: stretch of 3 or vertical shift of -5.

1) a) Graph  $y = 3(x + 1)^2$   
 Y-int is  $(0, 3)$

c) List the transformations:

d) Re-write  $y = 3(x + 1)^2$  in standard form.

A hand-drawn diagram on a grid background. A path is drawn from the bottom left towards the top center. The path consists of several segments, some of which are highlighted in blue. Two specific points on the path are circled: one in green at the top center and one in red lower down. Arrows point downwards from both circled points.

choice (technology, table of values, etc.)  
y-intercept. Write the equation in standard form.  
ch of 3 or vertical shift of -5.

→ shrunk by 3

b) List the transformations:  
h.  $\leftarrow$  one left  
→ opens down  
→ max.

c) Re-write  $y = 3(x + 1)^2$  in standard form

$y = -3(x + 1)(x + 1)$

$y = -3(x^2 + x \times x + 1)$

$y = -3(x^2 + 2x + 1)$

$y = -3x^2 - 6x - 3$

2) a) Graph  $y = -(x - 2)^2 + 6$

c) List the transformations:

b) Vertex is (\_\_\_\_\_, \_\_\_\_)

Y-int is ... ( )

d) Re-write  $y = -(x - 2)^2 + 6$  in standard form

