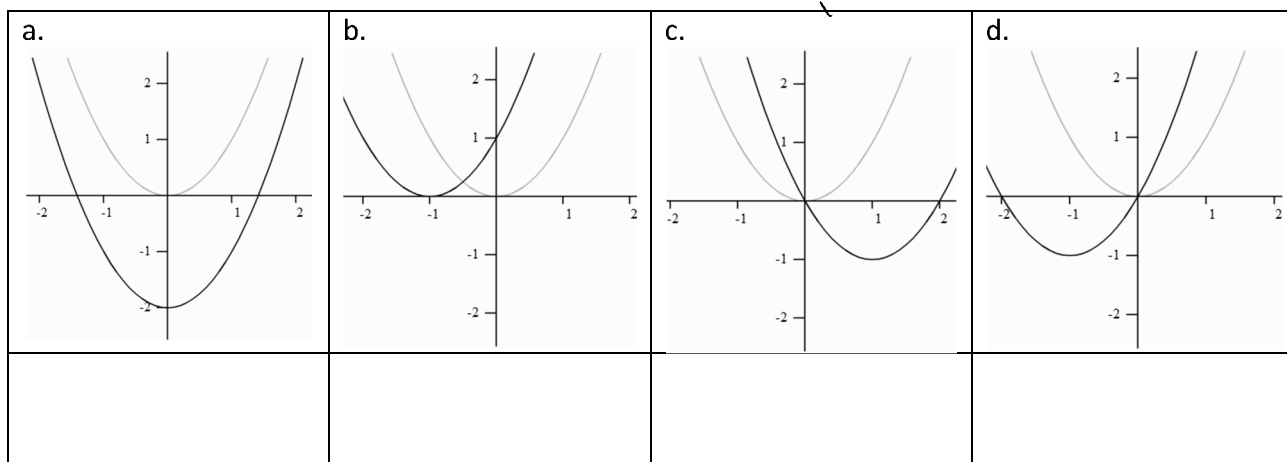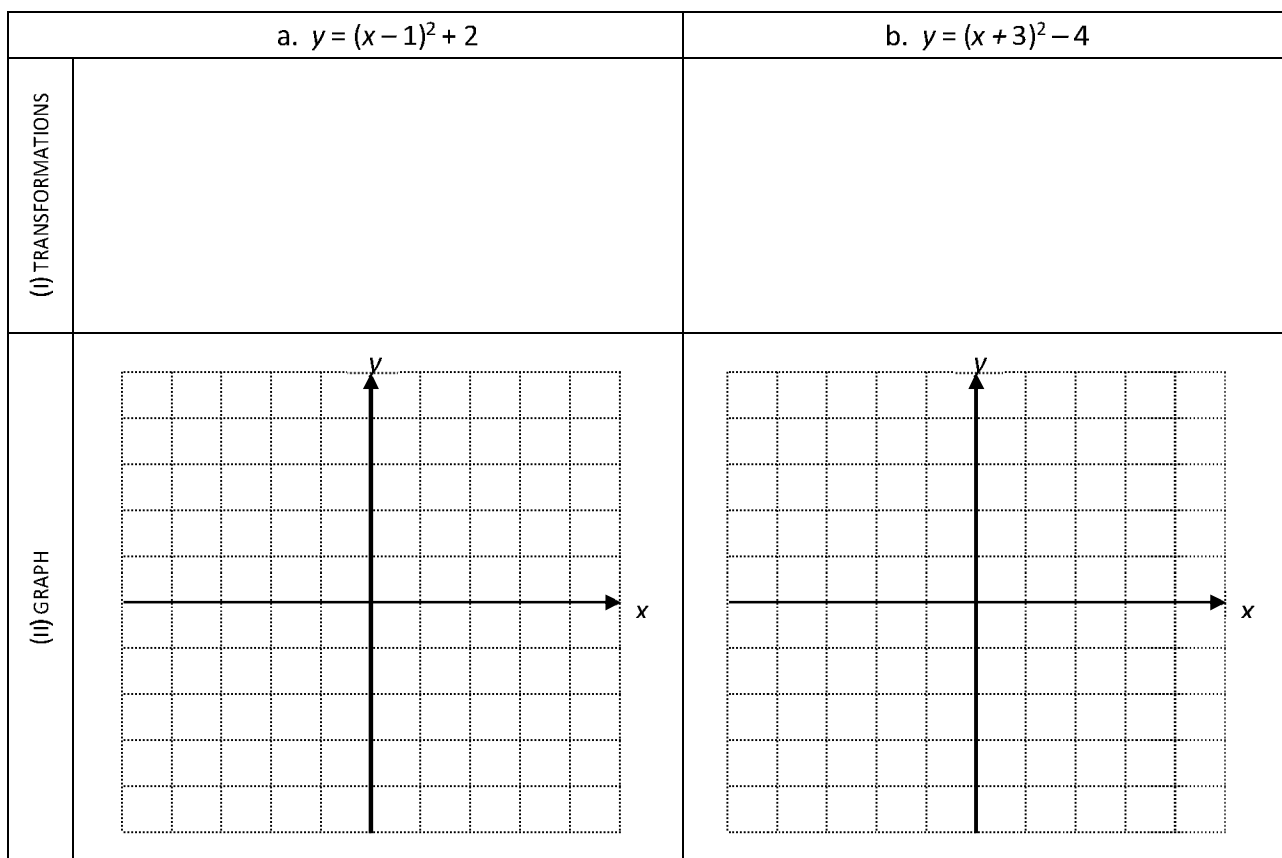# DAY 3 – Changing Quadratic Relations: The Values of 'h' and 'k'

1. For each of the following, state how the value of h and/or k is affecting the basic parabola *horizontal (left/right) or vertical (up/down) translation*. The basic parabola, $y = x^2$, is shown with a dotted line.

a.	b.	c.	d.

2. State the transformations and graph each of the following parabolas.

	a. $y = (x-1)^2 + 2$	b. $y = (x+3)^2 - 4$
(I) TRANSFORMATIONS		
(II) GRAPH		

3. For each set of quadratics, circle the one that has it's vertex farther from the x-axis.
    a. $y = x^2 + 5$ $y = x^2 - 4$ b. $y = x^2 + 2$ $y = x^2 - 3$

4. For each set of quadratics, circle the one that has it's vertex farther from the y-axis.
    a. $y = (x+3)^2$ $y = (x-2)^2$ b. $y = (x-1)^2$ $y = (x-2)^2$