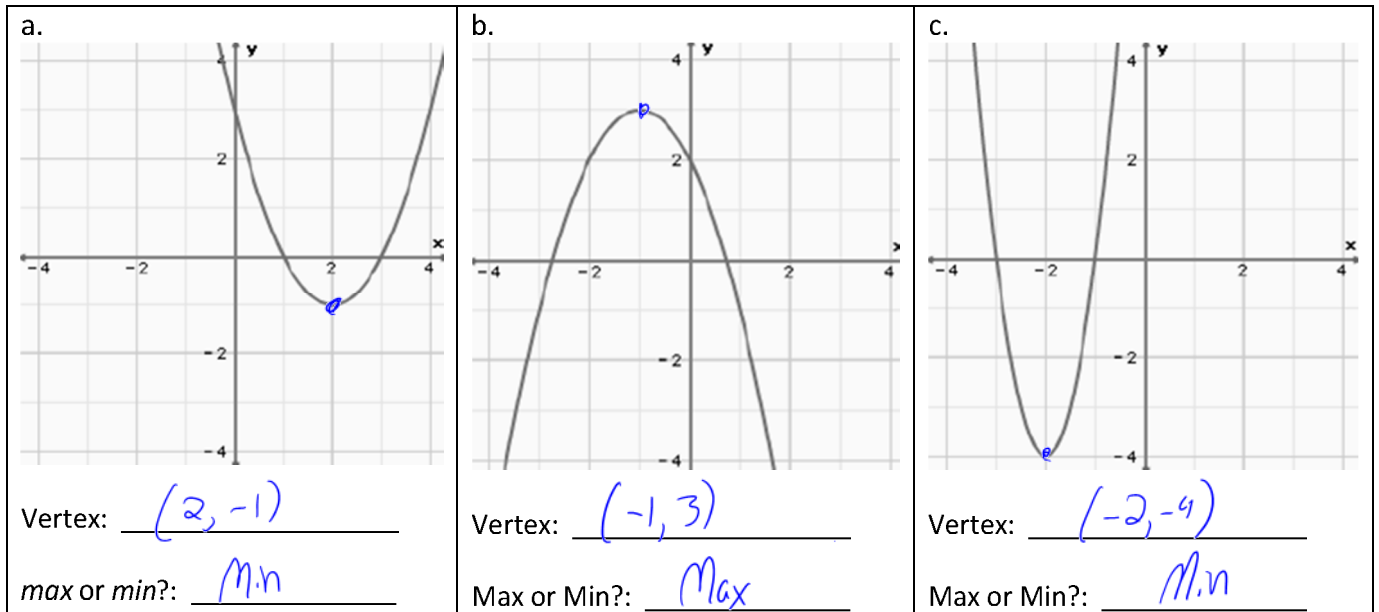
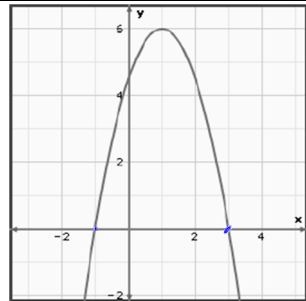
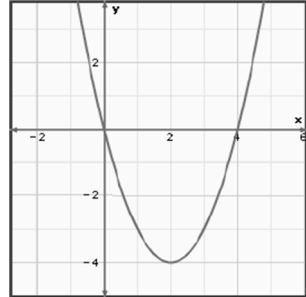


DAY 2 – Changing Quadratic Relations: The Value of 'a'

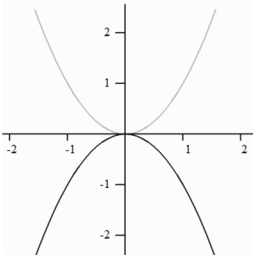
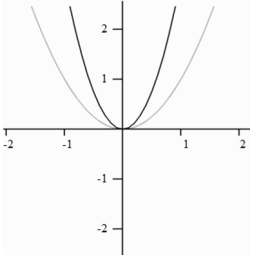
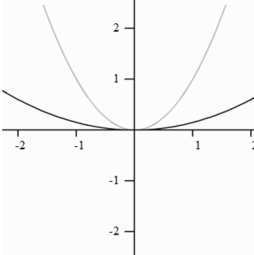
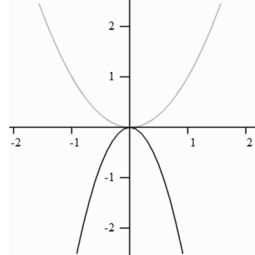
1. State the vertex and the maximum or minimum value for each parabola.



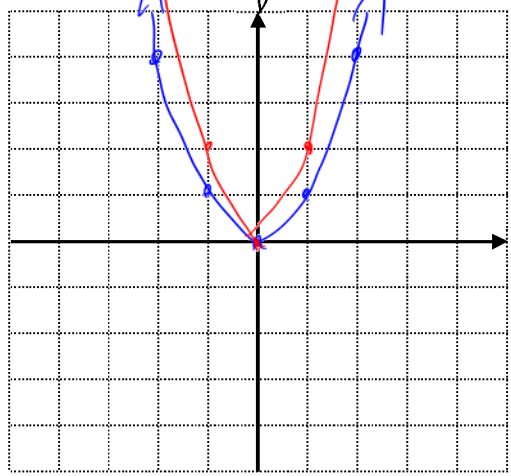
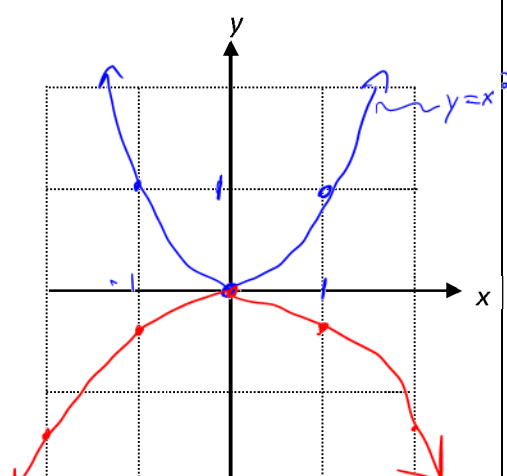
2. State the key features of each graph.

	zeros	y-intercept	vertex	axis of symmetry	optimal value
	$x = 3$ $x = -1$	$y = 4.5$	$(1, 6)$	$x = 1$	$y = 6$ max
	$x = 0$ $x = 4$	$y = 0$	$(2, -4)$	$x = 2$	$y = -4$ min

3. For each of the following, state how the value of a is affecting the basic parabola (compression, stretch and/or reflection). The basic parabola, $y = x^2$, is shown with a dotted line.

a. 	b. 	c. 	d. 
reflection	stretch	compression	reflection stretch

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

	a. $y = 2x^2$	b. $y = -\frac{1}{3}x^2$
(i) TRANSFORMATIONS	$a = 2$ $y = x^2$ in blue $y = 2x^2$ in red	$a = -\frac{1}{3}$ multiply the y-points by $-\frac{1}{3}$
(ii) GRAPH		

5. For each set of quadratics, circle the one that is wider

a. $y = 0.2x^2$ $y = 5x^2$

b. $y = 3x^2$ $y = -0.4x^2$

c. $y = 5x^2$ $y = 2x^2$

closest to 0

d. $y = 0.1x^2$ $y = 0.25x^2$

e. $y = -0.2x^2$ $y = 0.03x^2$

f. $y = 0.9x^2$ $y = -0.4x^2$