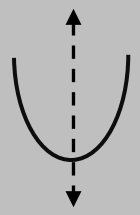
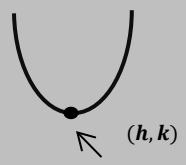
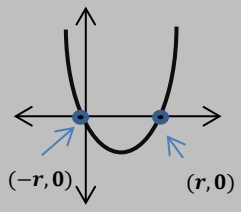
Three Forms of Quadratic Functions

If your equation is in _____ form, how do you find the _____?	**VERTEX FORM** $y = a(x-h)^2 + k$	**STANDARD FORM** $y = ax^2 + bx + c$	**FACTORED FORM** $y = a(x-r_1)(x-r_2)$
AXIS OF SYMMETRY (AOS)	$x = h$ (the AOS is the x value of the vertex) ***think opposite.	$x = \frac{-b}{2a}$	Find the x-intercepts first, then the Axis of symmetry is in the middle, the "average of the x-intercepts.
VERTEX	(h, k)	Plug AOS into the original function to solve for the y value of the vertex	Plug AOS into the original function to solve for the y value of the vertex
X-INTERCEPTS	Get into factored form and use the zero product property	Get into factored form and use the zero product property	Use the zero product property.
Y-INTERCEPT	*Plug in 0 for the x intercept **or** *get into standard form to find the c-value	y-intercept = c-value	* Plug in 0sfor the x's and find the y intercept **or** * Change equation into standard form and find the c-value

YOUR TURN	**VERTEX FORM** $y = (x+1)^2 - 9$	**STANDARD FORM** $y = x^2 - 6x + 5$	**FACTORED FORM** $y = 2(x-1)(x-3)$
AXIS OF SYMMETRY 			
VERTEX 			
X-INTERCEPTS 			
Y-INTERCEPT