

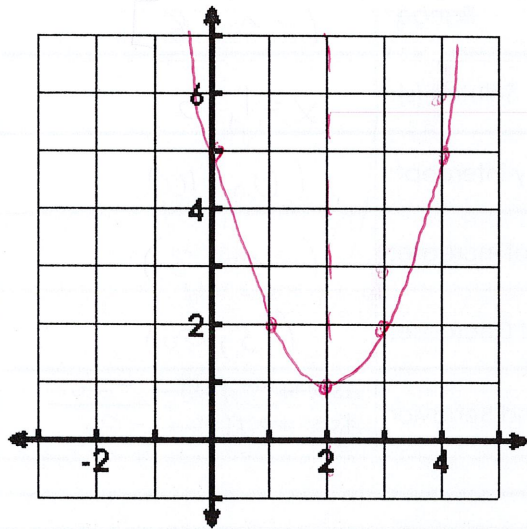
Name: _____

Date: _____

Graphing Quadratic Equations in Standard Form

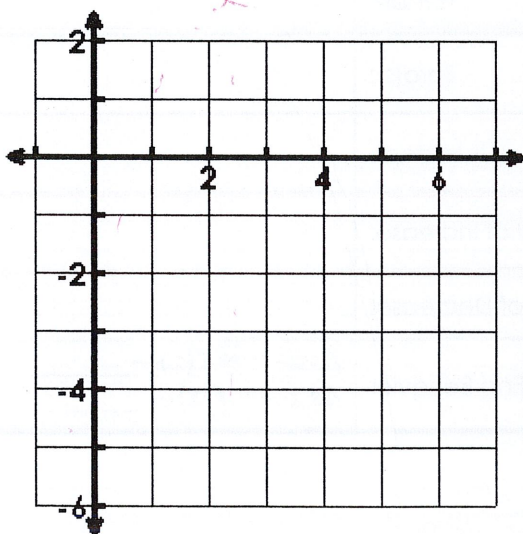
1. $f(x) = x^2 - 4x + 5$

$\frac{-b}{2a} = \frac{-(-4)}{2(1)} = \frac{4}{2} = 2$



Characteristics	
A.O.S.	$x = 2$
Vertex:	$(2, 1)$
Domain:	$(-\infty, \infty)$
Range:	$[1, \infty)$
Solution(s):	None
y-intercept:	$(0, 5)$
Interval of Increase:	$(2, \infty)$
Interval of Decrease:	$(-\infty, 2)$
End Behavior	$As x \rightarrow -\infty, f(x) \rightarrow \infty$ $As x \rightarrow \infty, f(x) \rightarrow \infty$

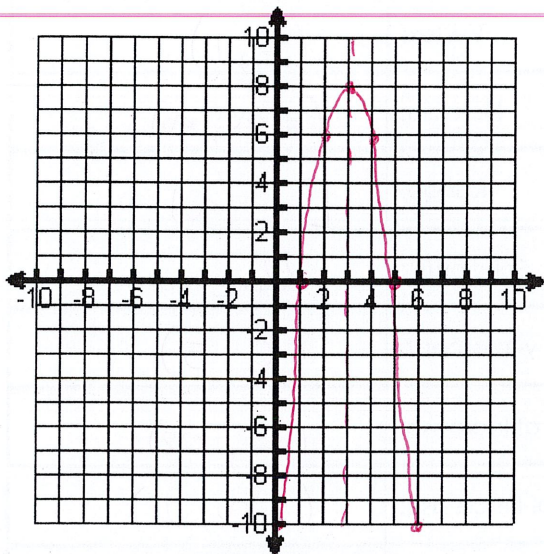
2. $f(x) = -x^2 + 6x - 8$



Characteristics	
A.O.S.	
Vertex:	
Domain:	
Range:	
Zero(s):	
y-intercept:	
Interval of Increase:	
Interval of Decrease:	
End Behavior	$As x \rightarrow -\infty, f(x) \rightarrow \underline{\hspace{2cm}}$ $As x \rightarrow \infty, f(x) \rightarrow \underline{\hspace{2cm}}$

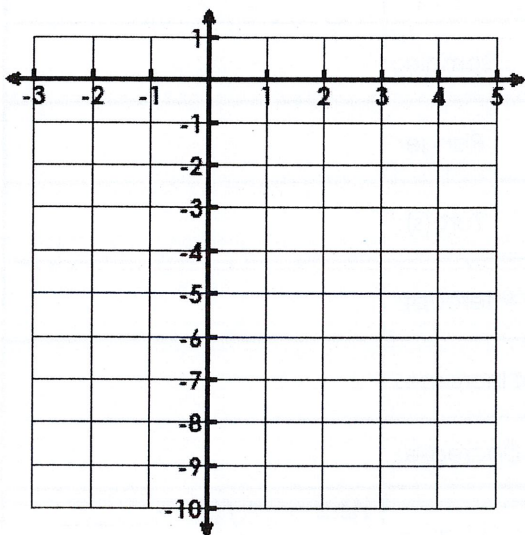
3. $f(x) = -2x^2 + 12x - 10$

$$-\frac{b}{2a} = \frac{-12}{2(-2)} = \frac{-12}{-4} = 3$$



Characteristics	
A.O.S.	$x = 3$
Vertex:	$(3, 8)$
Domain:	$(-\infty, \infty)$
Range:	$(-\infty, 8]$
Solution(s):	$x = 1, 5$
y-intercept:	$(0, -10)$
Interval of Increase:	$(-\infty, 3)$
Interval of Decrease:	$(3, \infty)$
End Behavior	$As x \rightarrow -\infty, f(x) \rightarrow -\infty$ $As x \rightarrow \infty, f(x) \rightarrow -\infty$

4. $f(x) = 3x^2 + 1$



Characteristics	
A.O.S.	
Vertex:	
Domain:	
Range:	
Zero(s):	
y-intercept:	
Interval of Increase:	
Interval of Decrease:	
End Behavior	$As x \rightarrow -\infty, f(x) \rightarrow \underline{\hspace{2cm}}$ $As x \rightarrow \infty, f(x) \rightarrow \underline{\hspace{2cm}}$