Name _____ **Date** _____ **Period** _____

Sec II
Unit 2 Practice Test

Part I: Double Matching
Match each standard form equation with its equivalent vertex form equation in column A and its factored form equation from column B. (2 points each)

Column A	Column B	Standard Form (Question)	Vertex Form (Column A)	Factored Form (Column B)
_____	_____	1) $y = x^2 + 2x - 8$	a) $y = (x-1)^2 - 9$	a) $y = (x+1)(x-8)$
_____	_____	2) $y = x^2 - 2x - 8$	b) $y = (x+1)^2 + 9$	b) $y = (x+2)(x-4)$
_____	_____	3) $y = x^2 + 6x + 8$	c) $y = (x+3)^2 - 1$	c) $y = (x-2)(x+4)$
_____	_____	4) $y = x^2 - 6x + 8$	d) $y = (x+1)^2 - 9$	d) $y = (x-1)(x-8)$
			e) $y = (x-3)^2 + 1$	e) $y = (x-2)(x-4)$
			f) $y = (x-3)^2 - 1$	f) $y = (x+2)(x+4)$

Part II: Multiple Choice (1 point each)

5) Identify the y-intercept of the equation $y = 2x^2 + 36x + 165$.

a) $(0, -9)$ b) $(0, 165)$ c) $(0, 27)$ d) $(0, -159)$

6) Identify the vertex of the equation $y = -3(x-8)^2 - 3$.

a) $(-8, 3)$ b) $(8, -3)$ c) $(8, 3)$ d) $(3, -8)$

7) Identify the x-intercept of the equation $y = -(x+10)(x+2)$.

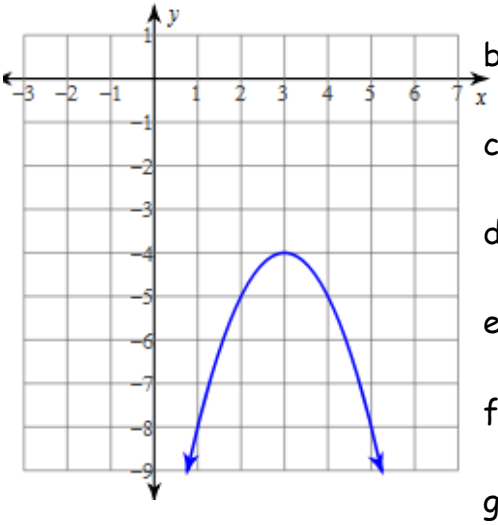
a) $(10, 0)$ and $(2, 0)$ b) $(-10, 0)$ and $(-2, 0)$

c) $\left(\frac{25}{2}, 0\right)$ and $\left(-\frac{19}{2}, 0\right)$ d) none

Part III: Short Answer

Given a graph, provide the requested information, equations can be 2 of the 3 different types: Standard Form, Vertex Form, or Intercept Form. (a-f: 1 pt each, g-h: 4 pts each)

8)



a) Vertex: _____

b) Stretch: _____

c) Axis of Symmetry: _____

d) y-intercept(s): _____

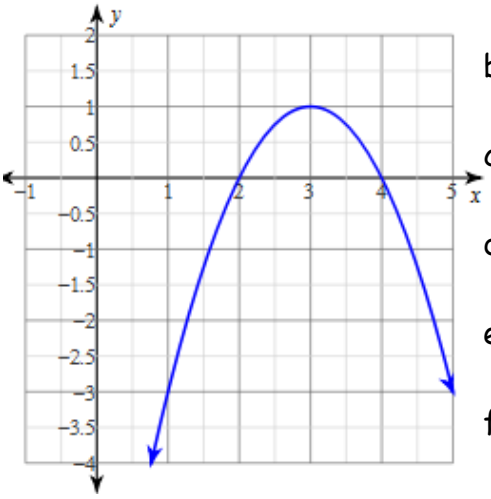
e) x-intercept(s): _____

f) Open: _____

g) Equation 1: _____

h) Equation 2: _____

9)



a) Vertex: _____

b) Stretch: _____

c) Axis of Symmetry: _____

d) y-intercept(s): _____

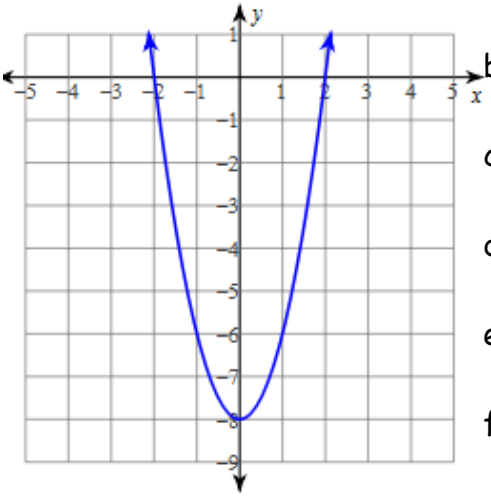
e) x-intercept(s): _____

f) Open: _____

g) Equation 1: _____

h) Equation 2: _____

10)



a) Vertex: _____

b) Stretch: _____

c) Axis of Symmetry: _____

d) y-intercept(s): _____

e) x-intercept(s): _____

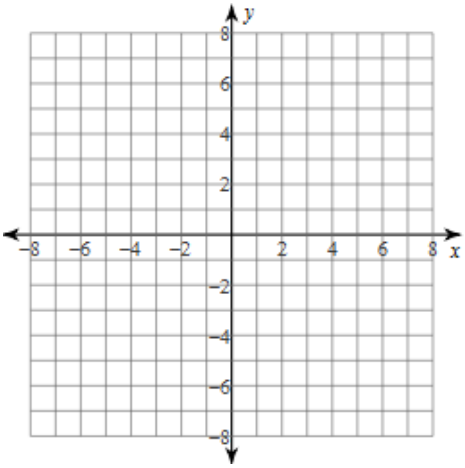
f) Open: _____

g) Equation 1: _____

h) Equation 2: _____

Given an equation, provide the requested information and graph the parabola. (a-f: 1 pt each, graphing 3 pts each)

11) $y = x^2 + 2x + 5$



a) Vertex: _____

b) Stretch: _____

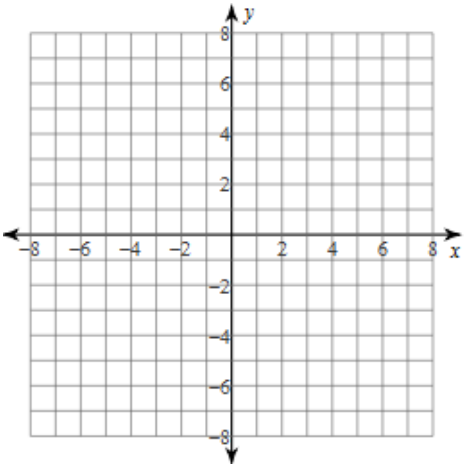
c) Axis of Symmetry: _____

d) y-intercept(s): _____

e) x-intercept(s): _____

f) Open: _____

12) $y = 2(x + 5)^2 - 8$



a) Vertex: _____

b) Stretch: _____

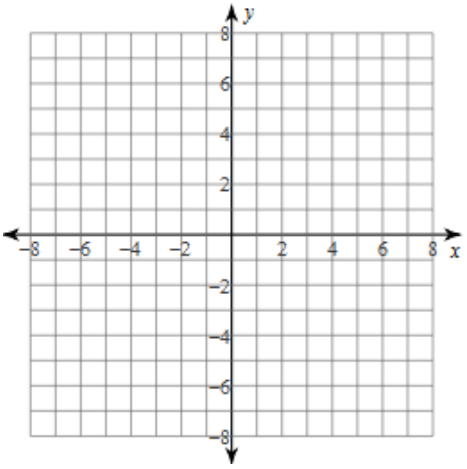
c) Axis of Symmetry: _____

d) y-intercept(s): _____

e) x-intercept(s): _____

f) Open: _____

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



a) Vertex: _____

b) Stretch: _____

c) Axis of Symmetry: _____

d) y-intercept(s): _____

e) x-intercept(s): _____

f) Open: _____

Use the information provided to write the vertex form equation of each parabola. (4 pts each)

14) $y = x^2 + 10x + 19$

15) $y = 4x^2 + 80x + 395$

Factor each completely. (3 pts each)

16) $x^2 - 7x - 8$

17) $x^2 - 4x + 3$

18) $-3x^2 + 30x - 72$

19) $12x^2 + 132x + 360$