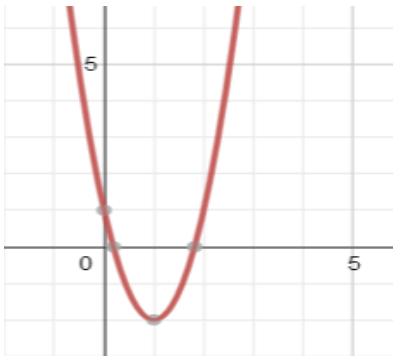Name: _____   Date: _____   Block: _____

REVIEW: Quadratic Functions

General Form: y = ax² + bx + c   Vertex Form: y = a (x – p)² + q   Factored form y = a (x – m)(x – n)
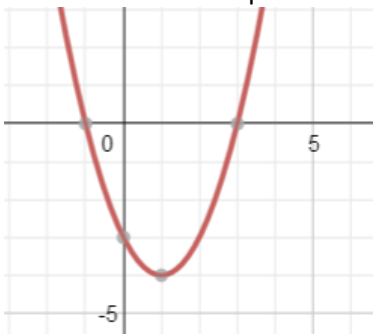

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. Which set of data is correct for this graph?

	Axis of Symmetry	Vertex	Domain	Range
A.	$x = 1$	(-2, 1)	$x ⬚ R$	$y⬚ R$
B.	$x = 1$	(1, -2)	$x ⬚ R$	$y ≥ -2$
C.	$x = -2$	(-2, 1)	$-2 ⬚ x ⬚ 1$	$y ≥ -2$
D.	$x = -2$	(1, -2)	$0.2 ⬚ x ⬚ 1.8$	$y⬚ R$

2. What is the correct quadratic function for this parabola?

A. $y = (x – 1)(x – 3)$ **B.** $y = (x + 3)(x – 1)$

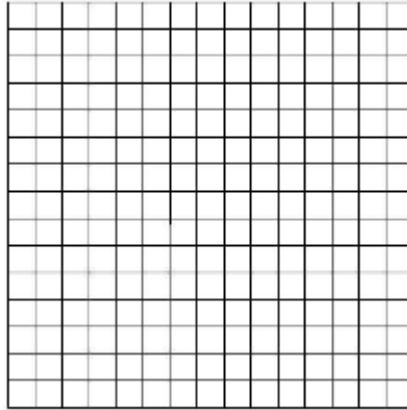**C. y** $= (x – 3)(x + 1)$ **D.** $y = (x + 1)(x + 3)$

3. Which set of data is correct for the quadratic relation $y = –2(x + 5)^2 + 10$?

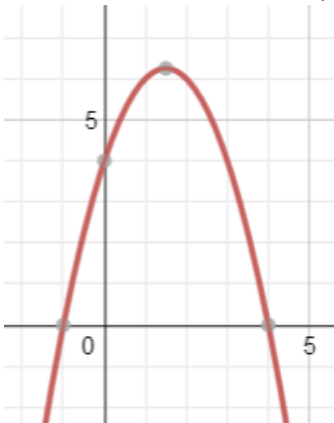|	Direction parabola opens	Vertex	Axis of Symmetry
A.	downward	(-5, 10)	$x = -5$
B.	downward	(10, -5)	$x = 10$
C.	upward	(5, -10)	$x = -5$
D.	upward	(-10, 5)	$x = 10$

Short Answer

4. Complete the table of values, then graph $y = x^2 - 1x - 2$.

X	Y
-2	
-1	
0	
1	
2	

5. Determine the x-intercepts and then write the equation for the parabola.

6. Fill in the table for the quadratic function $y = 2(x - 3)(x + 2)$.

X-intercepts (zeros)	
Axis of symmetry equation	X =
Vertex	
Y- intercept	

7. **a)** The graph of a quadratic function has *x*-intercepts 6 and -1. Write a quadratic equation that has these roots. (Show all work. There are many possibilities. ☺)
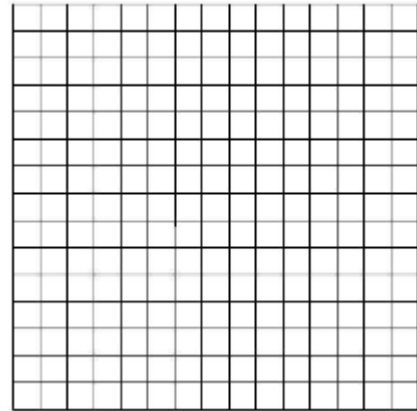
b) Given the equation y = (x + 5)(x – 7), convert into general form and describe what you now know. Determine the vertex and then rewrite in vertex form.

8.

Sketch the graph of $y = (x + 3)^2 - 4$, then state the domain and range of the function.

Domain:_____

Range: _____

9. Determine the equation of a parabola with vertex (3, 4) and point (–4,   5).

10. Determine the equation for this quadratic function. Write the equation in General Form $(Ax^2 + Bx + C = 0)$. Show all your steps.

11. Tell me everything you know about this graph: