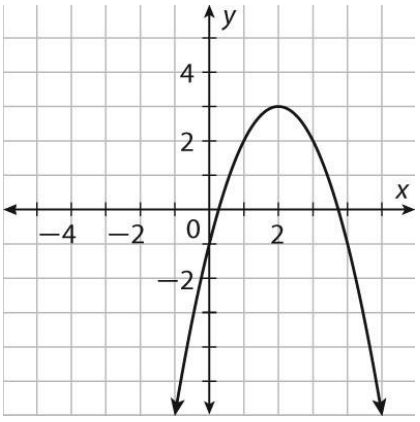
NAME : _____

CLASS : _____

DATE : _____

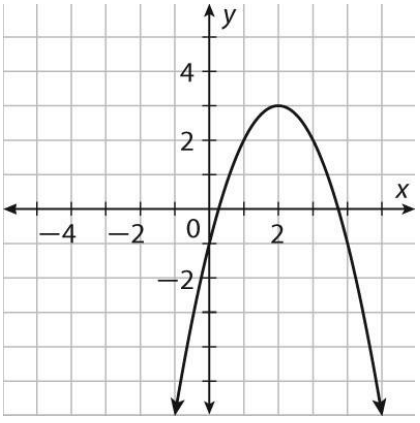
Homework 8.1 due Mon 4/5 *3 Require Graph Photo attached*

16 Questions

1. 

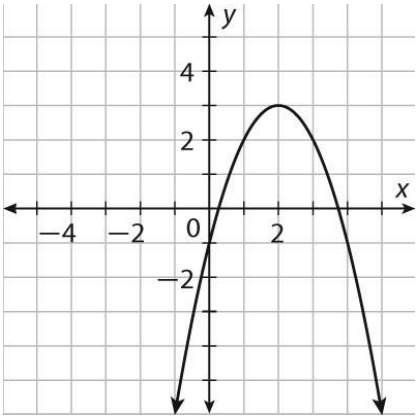
What is the range of the function?*Hint: Range is the y-values where this parabola is graphed

- ☐ a) $y \leq 2$
- ☐ b) $y \leq 3$
- ☐ c) $y \geq 2$
- ☐ d) $y \geq 3$

2. 

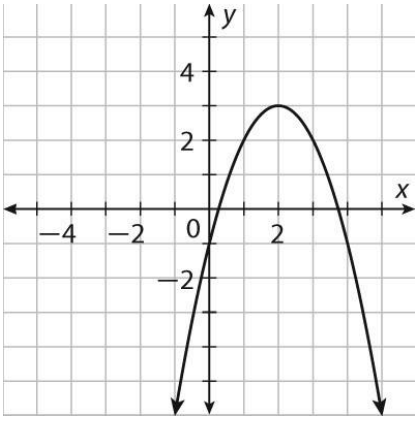
What is the domain of the function when this parabola is increasing?

- ☐ a) $x < 2$
- ☐ b) $x > 2$
- ☐ c) $x < 3$
- ☐ d) $x > 3$

3. 

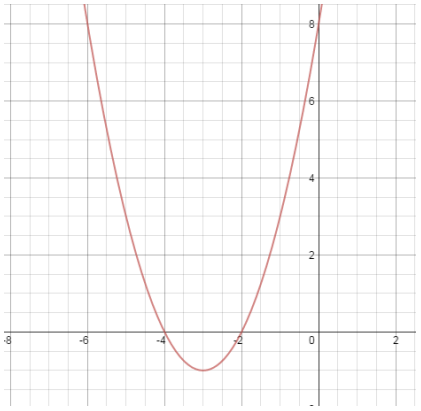
What is the domain of the function when this parabola is decreasing?

- ☐ a) $x < 2$
- ☐ b) $x > 2$
- ☐ c) $x < 3$
- ☐ d) $x > 3$

4. 

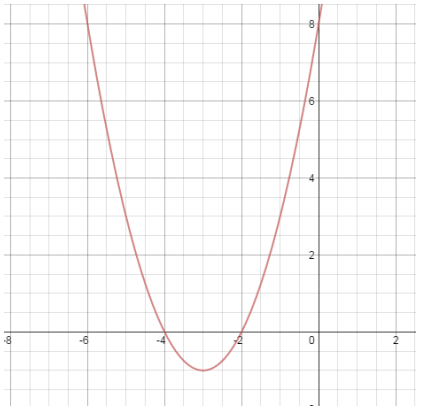
Identify the vertex of this function and also indicate whether it is a maximum or minimum {mark both answers}

- ☐ a) Vertex is (0, -.5)
- ☐ b) Vertex is (2, 3)
- ☐ c) The vertex is also a minimum
- ☐ d) The vertex is also a maximum

5. 

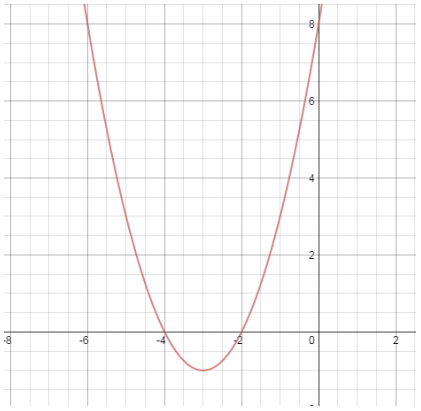
What is the range of this function?

- ☐ a) $y \geq -3$
- ☐ b) $y \geq -1$
- ☐ c) All real numbers
- ☐ d) $y \leq -1$
- ☐ e) $y \leq -3$

6. 

If the vertex is at (-3, -1), what are the correct domain values when this function is increasing or decreasing? {mark two}

- ☐ a) $x < -3$ when the function is decreasing
- ☐ b) $x < -3$ when the function is increasing
- ☐ c) $x > -3$ when the function is decreasing
- ☐ d) $x > -3$ when the function is increasing

7. 

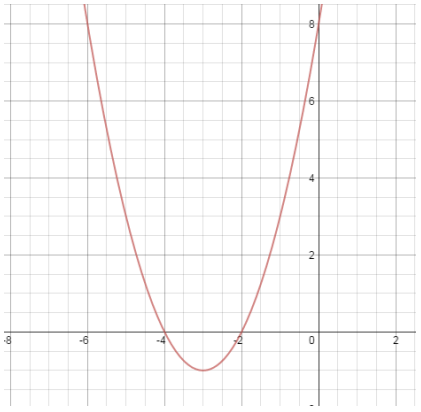
Identify the zeros, mark all that apply

☐ a) (-2, 0)

☐ b) (-3, -1)

☐ c) (0, 8)

☐ d) (-4, 0)

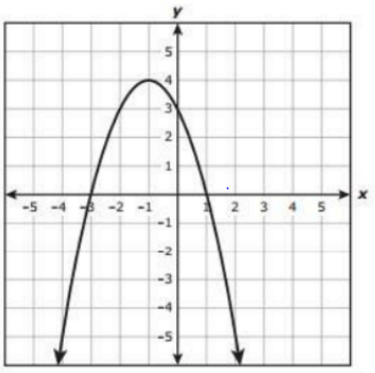
8. 

If the vertex is at (-3, -1), is this a minimum or a maximum?

☐ a) minimum

☐ b) maximum

☐ c) neither

9. 

Choose all that are correct statements for this function

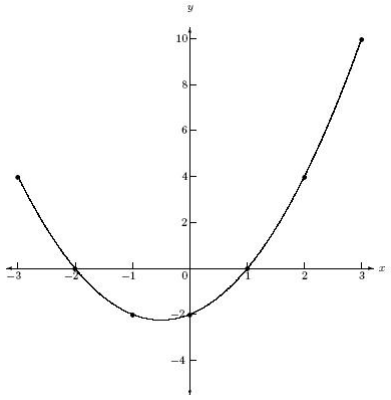
☐ a) The vertex of this function is (-1, 4)

☐ b) A zero is (0, 3)

☐ c) A zero is (-3, 0)

☐ d) A zero is (1, 0)

☐ e) This function has a minimum

10. 

Choose all that are correct statements for the function

☐ a) The vertex is (1,0)

☐ b) The y-intercept is (0, -1)

☐ c) The zeros are (-2, 0) and (1, 0)

☐ d) This graph has a minimum

11. $f(x) = -3x - 11$

Which of the following statements are true about the function?

- ☐ a) The function is linear
- ☐ b) The function is quadratic
- ☐ c) The function is decreasing
- ☐ d) The function is opening downward
- ☐ e) The function is increasing

12. $f(x) = 3x^2 + 8x - 1$ Which of the following are true about the function?

- ☐ a) The function is linear
- ☐ b) The function is quadratic
- ☐ c) The function opens downward, thus has a maximum
- ☐ d) The function opens upward, thus has a minimum
- ☐ e) The function is increasing

13. $f(x) = \frac{3}{8}x + 12$ Which of the following are correct statements for the function

- ☐ a) The function is linear
- ☐ b) The function is quadratic
- ☐ c) The function is increasing
- ☐ d) The function is decreasing
- ☐ e) The function is opening upward

14. $f(x) = x^2 - 5x + 2$ Using technology (Desmos or Graphing Calculator), determine the vertex of the functionATTACH A PHOTO OR SCREEN SHOT OF THE GRAPH

- ☐ a) (0,2)
- ☐ b) (3,1)
- ☐ c) (2.5, -4.25)
- ☐ d) (-2.5, 0)

15. $f(x) = 3x^2 + 5$ Using technology (Desmos or Graphing Calculator), determine the vertex of the functionATTACH A PHOTO OR SCREEN SHOT OF THE GRAPH

- ☐ a) (0, 5)
- ☐ b) (3, 0)
- ☐ c) (3, 5)
- ☐ d) (-4, 2)

16. $f(x) = -8x^2 + 3x + 7$ Using technology (Desmos or Graphing Calculator), determine the vertex of the functionATTACH A PHOTO OR SCREEN SHOT OF THE GRAPH

- ☐ a) (0, 7)
- ☐ b) (-8, 7)
- ☐ c) (2.2, 5.1)
- ☐ d) (0.2, 7.3)