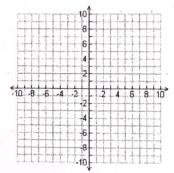
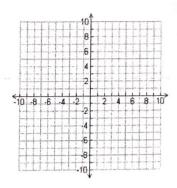
Unit 4 Quiz Review: Vertex Form/Characteristics

1. 
$$f(x) = (x + 2)^2 - 16$$

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



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Opens: up or down

Vertex:

Max or Min:

Axis of symmetry: \_\_\_\_\_

X-Intercept: \_\_\_\_\_ Y – Intercept:

Rate of Change from x = -1 to x = 0

Domain: \_\_\_\_\_

Range:

End behavior : As  $x \rightarrow -\infty$ ,  $y \rightarrow$ 

 $x \to \infty, y \to$ 

Interval of Increase: \_\_\_\_\_ Interval of Decrease: \_\_\_\_\_ a = \_\_\_ h = \_\_\_ k = \_\_\_

Opens: up or down

Vertex:

Max or Min:

Axis of symmetry: \_\_\_\_\_

Roots:

Y – Intercept:

Slope from x = 1 to x = 3

Domain:

Range: \_\_\_\_\_

End behavior : As  $x \rightarrow -\infty$ ,  $y \rightarrow$ 

 $x \to \infty, y \to$ 

Interval of Increase: \_\_\_\_\_

Interval of Decrease: \_\_\_\_\_

a = h = k = \_\_\_

Opens: up or down

Vertex:

Max or Min:

Axis of symmetry: \_\_\_\_\_

Zeros: \_\_\_\_\_

Y – Intercept:

Rate of Change from x = -4 to x = -2Domain:

Range: \_\_\_\_

End behavior: As  $x \rightarrow -\infty$ ,  $y \rightarrow$ 

 $x \rightarrow \infty, y \rightarrow$ 

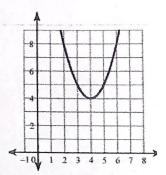
Interval of Increase: \_\_\_\_\_

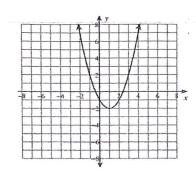
Interval of Decrease:

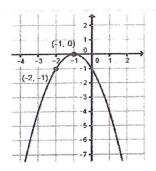
## Write the equation of the graph in vertex form:

AOS: \_\_\_\_; Vertex: \_\_\_\_\_\_ AOS: \_\_\_\_; Vertex: \_\_\_\_\_

AOS: \_\_\_\_; Vertex: \_\_\_\_\_







Convert the following from vertex form to standard form:

7. 
$$f(x) = -(x-2)^2 + 1$$

8. 
$$y = 4(x + 3)^2 - 8$$

9. Which is the graph of  $y = -2(x + \frac{1}{2})$ 

