

Algebra 1
Writing Project Preview

Name: _____

**In 1 - 3, graph the quadratic functions and name the characteristics.
State the domain and range in interval notation.**

1. $f(x) = -(x + 4)^2 - 7$

Vertex:

Table of Values:

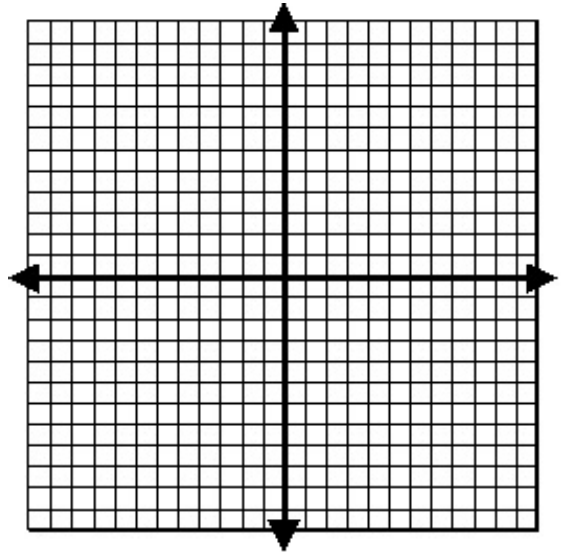
AOS:

Transformations:

- 1)
- 2)
- 3)

Domain:

Range:



2. $f(x) = \frac{1}{2}(x + 2)(x - 6)$

Zeros:

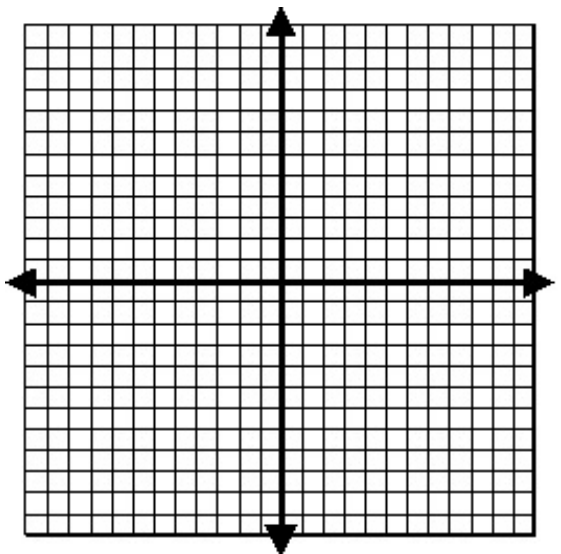
x-intercepts:

AOS:

Vertex:

Domain:

Range:



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

a= b= c=

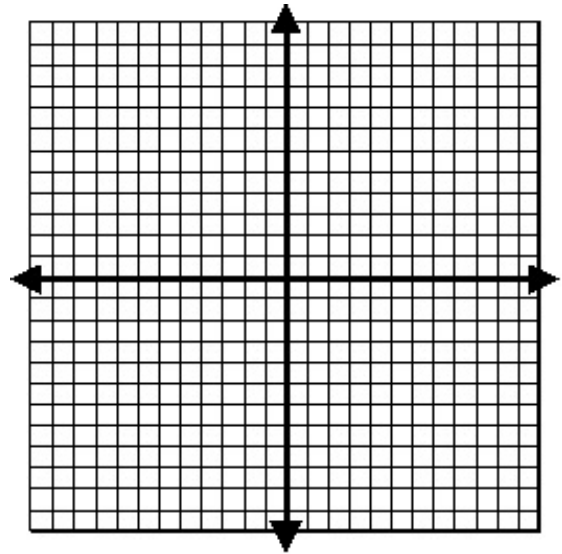
Vertex:

Table of Values:

AOS:

y-intercept:

Min/Max:



4. How does the graph of $f(x) = 3(x + 1)^2 - 5$ compare to the graph from #1?

5. Circle the correct term to complete each sentence:

- a. The **(vertex, axis of symmetry)** is the highest or lowest point of a parabola.
- b. The **(domain, range)** of a function is the set of all possible values for the input, or independent variable of the function.
- c. A(n) **(quadratic, exponential)** function is a function of the form $f(x) = ax^2 + bx + c$.
- d. The table below represents a(n) **(linear, exponential)** function.

x	1	2	0	3	4
y	40	20	10	5	2.5

6. A hammock that hangs between two trees makes a parabola shape that has the equation $y = 1.25(x - 1)(x - 10)$, where x and y are measured in meters. How far away are the trees from one another?

