1. Identify the vertex and intercepts for each function below:

(a)
$$f(x) = -3x^2$$

(d)
$$f(x) = x^2 + 4x + 3$$

(b)
$$g(x) = -(x-2)^2$$

(e)
$$g(x) = -2x^2 + 10x - 7$$

(c)
$$f(x) = \frac{1}{2}(x-4)^2 + 5$$

(f)
$$f(x) = -\frac{2}{7}(x-5)^2 - 8$$

- 2. Consider the function $f(x) = (x-4)^2 2$.
 - (a) Find the x-intercept(s):

(b) Find the y-intercept:

(c) Find the vertex:

(d) What is the axis of symmetry?

- (e) What is the maximum or minimum value?
- (f) Complete the table of values and graph:



- 3. Consider the function $g(x) = 2x^2 12x + 10$.
 - (a) Find the x-intercept(s):

(b) Find the y-intercept:

(c) Find the vertex:

(d) What is the axis of symmetry?

- (e) What is the maximum or minimum value?
- (f) Complete the table of values and graph: