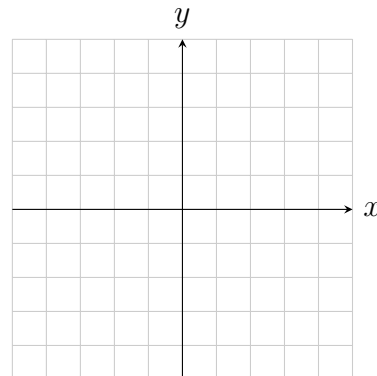


Name: \_\_\_\_\_

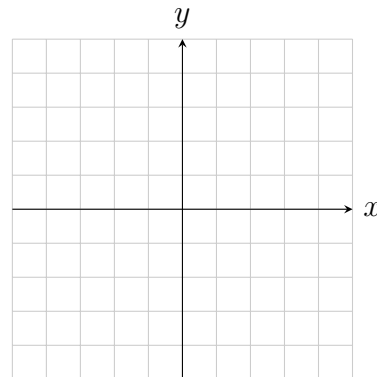
1. Create a table of values (an incomplete numerical description) for the following functions and then plot the equation. What  $x$ -values should you be choosing for your table of values?!?!  
 $f(x) = -\frac{3}{4}x + 2$

$$f(x) = -\frac{3}{4}x + 2$$



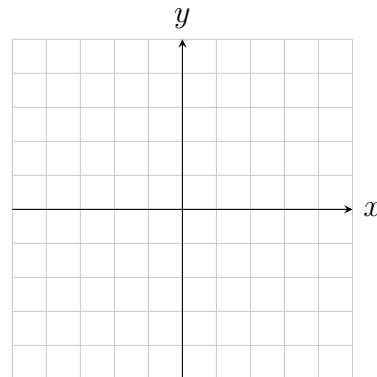
2. Identify the slope and  $y$ -intercept of the following function and then use the slope and  $y$ -intercept to graph the function.  
 $f(x) = \frac{3}{2}x - 5$

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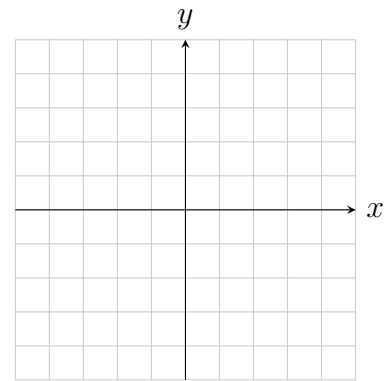


3. Identify the slope and a point on the following function and then use that information to graph the function.  
 $f(x) = 7(x + 3) - 10$

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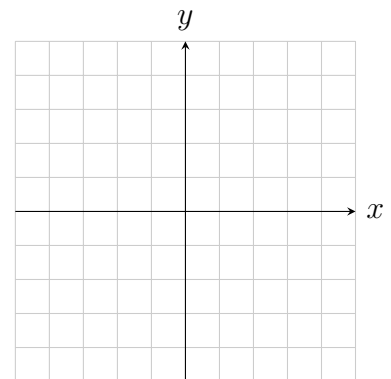


4. Find the  $x$  and  $y$ -intercepts of  $5x - 6y = -90$  and one other point on the line. Use this information to graph the equation.



5. Use technology to create a table of values for the following function and use it to plot the function. Then find the requested information below.

$$h(x) = -x^2 + 4x - 3$$



- |                    |                     |           |                        |
|--------------------|---------------------|-----------|------------------------|
| a. Vertex:         | c. $x$ -intercepts: | e. Range: | g. Solve $h(x) = 2$    |
| b. $y$ -intercept: | d. Domain:          | f. $h(1)$ | h. Solve $h(x) \geq 2$ |

6. Open Geogebra and graph  $f(x) = a(x - h)^2 + k$  where you create sliders for  $a$ ,  $h$ , and  $k$ . Play with the sliders and discuss what happens to the graph as these values change. What is the vertex? When does the graph open up or down? How is the graph stretched vertically? What is the basic graph that we start with?

7. Given the following functions, determine:

i. The  $x$ -shift

iii. The vertex

v. Whether it opens up or down

vii. The range

ii. The  $y$ -shift

iv. The  $y$ -stretch

vi. The domain

viii. The maximum or minimum  $y$ -value

a.  $f(x) = 8(x - 7)^2 - 8$

b.  $g(x) = -2(x + 3)^2 + 5$

8. Given the following graphs, determine the symbolic form (vertex) of the function.

