

Practice 1.1.3 pt. 1**Remember to show your work!**

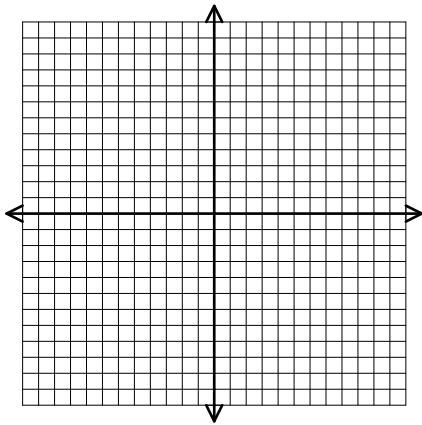
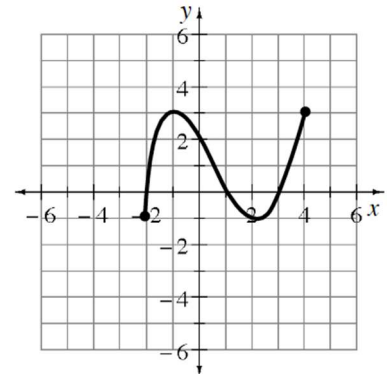
1-35. Examine the function $y=g(x)$ graphed at right.

Which x -values have points on the graph? That is, describe the domain of g .

What are the possible outputs for $g(x)$? That is, what is the range?

Ricky thinks the range of $g(x)$ is $-1, 0, 1, 2,$ and 3 . Is he correct? Why or why not?

Make a sketch of another function with the same domain and range as g .



1-36. George was solving the equation $(2x - 1)(x + 3) = 4$ and he got the solutions $x=1/2$ and $x=-3$. Jeffrey came along and said, "You made a big mistake! You set each factor equal to zero, but it's not equal to zero, it's equal to 4. So, you have to set each factor equal to 4 and then solve." Who is correct? **Show George and Jeffrey how to solve this equation. To be sure that you are correct, check your solutions.**

1-37. On many graphing calculators, equations must be entered in $y =$ form. Rewrite each equation in $y =$ form. Then use the Desmos tool to confirm that your equations are correct. You will confirm the correctness of your equations by typing the original into Desmos on one line and then typing in your " $y =$ " equation right below the original. If the two functions are "on top of each other" then you have converted the equation correctly.

a. $x = 3y + 6$

b. $x = 5y - 10$

c. $x = y^2$

d. $x = 2y^2 - 4$

e. $x = (y - 5)^2$

1-38. Given $f(x) = 2x - 7$, complete parts (a) through (c).

a. Compute $f(0)$.

b. Solve $f(x)=0$.

c. What do the answers to parts (a) and (b) tell you about the graph of $f(x) = 2x - 7$.