

Homework 9

Finding Linear Graphs

Throughout this unit, you are using the graphs of linear equations and inequalities to understand problems. The purpose of this assignment is to have you look at the techniques you use to graph linear equations, and perhaps to find some shortcuts. In class tomorrow, you can share what you have found with others.

1. One approach to graphing is to make a table of number pairs that fit the equation, graph them, and then connect the points with a straight line.
 - a. Create a table of at least five number pairs that satisfy the equation $3x + y = 9$.
 - b. Plot the number pairs from your table and connect them with a straight line.
2. Now graph these equations, looking for shortcuts or special techniques. Pay attention to the methods you use, because you will be writing about your methods in Question 3. (*Note: Read Question 3 before you do Question 2.*)
 - a. $y = x + 4$
 - b. $x + y = 6$
 - c. $2x = 3y$
 - d. $2x + 3y = 12$
 - e. $5y = 6x - 30$
3. Describe in detail what steps you go through when you graph a linear equation. Include any special methods you use that you think might help others. In particular, when you are looking for specific points to plot, how do you decide what numbers to try? If your approach depends on the particular equation, explain how you decide what method to use.

