

Pre-Algebra

Homework 9 - Graphing

1. Create a Rectangular coordinate system and plot the following points.

A(1,0)

B(2,-2)

C(-2,5)

D(-3 $\frac{1}{2}$,4)

E(-4 $\frac{1}{2}$,1 $\frac{1}{3}$)

2. Create a rectangular coordinate system and plot all the locations George visited while doing his errands on Saturday. Be sure to label each location with its proper coordinates. Place his home at coordinate (0,0).

George started at home and traveled 3 blocks East to mail a package at the post office (a). He then travelled 2 blocks North to get \$40 from the bank (b). He then travelled 1 block West and 1 block North to pick up his dry cleaning (c). Finally, he rewarded himself with a Latte from the coffee shop 3 blocks South (d). How far does he have to walk to get home now?

3. Consider the two plots below. They represent the value, in dollars, of the Coke and Pepsi stock over several months.

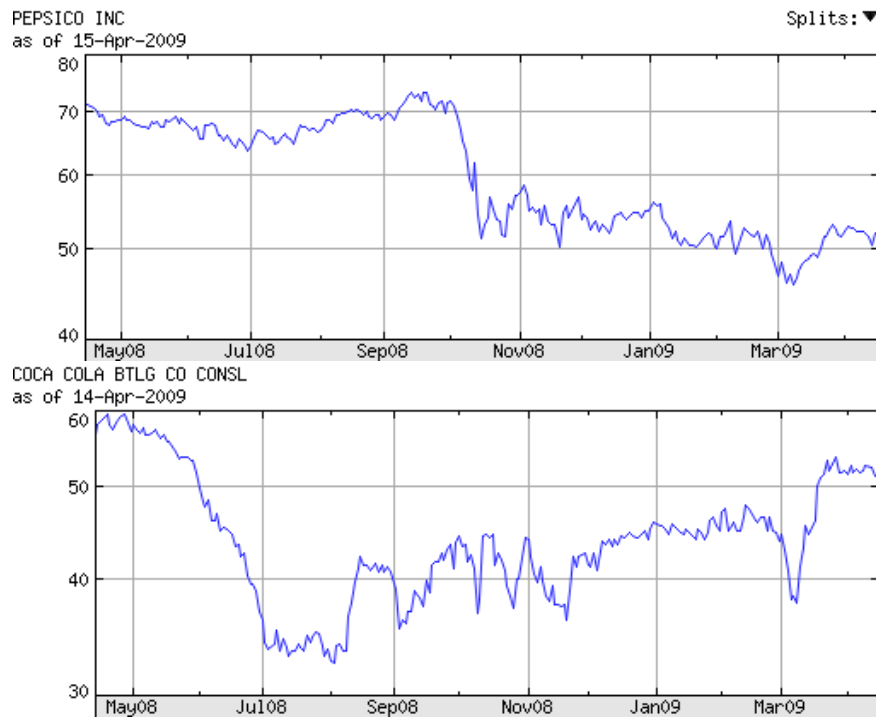


Figure 1: Value of Pepsi and Coke stocks between May 2008 and April 2009.

- 1) How much would it cost to buy one share of Coke and one share of Pepsi on the first of May 2008?

- 2) In September of 2008, how much were each of those shares worth?
 - 3) When is Pepsi's stock worth less than Cokes?
 - 4) Hind sight is 20x20. When was the best time to buy a share of Coke, if you were going to sell it in April 2009? How much money would you make per share you bought?
4. Each group of 2 points lie on the same line. What is the slope of each line. Which line is the steepest?
 - a) (1,0) (4,1)
 - b) (2,-2) (-3,1)
 - c) (0,5) (1,-1)
 - d) (2,2) (3,-1)
5. Determine the slope and y-intercept for the following equations that are linear. Specify which are not linear equations. (Remember $y^2 = y \cdot y$)
 - a) $\frac{1}{5}y = 2x - 3$
 - b) $2x = -4y - 2x + 16$
 - c) $y^2 - 2x = 4$
 - d) $2y^2 = y(4x + 6)$
 - e) $5x - 3y = -3y + 5$
6. A ladder is to reach a window 20 feet above the ground. You place the ladder so it has a slope of 2. How far is the base from the building?
 7. A painting company charges \$150 to paint one room and \$40 for each additional room. How much would it cost to paint 6 rooms? Create a plot of the total cost vs. number of rooms. Specify at least 3 points before you draw a line.