

Pre-Algebra

Class 9 - Graphing - Worksheet

1. Create a qualitative plot to describe the following situations.
 - a) You decide to ride your bicycle to the grocery store. It is 5 miles away and is uphill the entire way. You spend about 30 minutes at the grocery store before returning home. Plot distance vs. time.
 - b) On a snowy day two kids take their toboggan to the tallest hill in town. Plot their velocity vs. distance as they travel down the hill.
 - c) A farm stand sells corn. The corn is picked all morning to fill the farm stand. The stand sells corn from 9am to 7pm with most sales going to people on their way home after work. Plot the amount of corn in the stand throughout the day.
 - d) A business takes out a loan for \$50,000. They have a really good first year, making more than enough to pay back the loan. What might the worth of the company vs. time look like for that first year?
 - e) Describe the outdoor temperature for one day in the Summer time. Do the same for a day in the Winter time.
2. You decided to buy a new hybrid car for \$20,000. It gets 50 miles to the gallon. Your friend decided to buy a normal car at \$18,000 which only gets 20 miles to the gallon. You both go on the same car trip across the country.

Gas costs \$2.00 per gallon. How many miles must you drive for your hybrid to overall cost less than your friend's car? Do the following to answer this question.

 - (a) How much gas money do you need to drive 10000 miles? How much does your friend need?
 - (b) How much have you spent after 10000 miles? How much has your friend spent after 100 miles? (Include the cost of the car.)
 - (c) Create a linear plot of total cost vs. distance for both you and your friend. You already have 2 points for each line. Put both lines on the same plot.
 - (d) What is the slope and y-intercept for both cars? Write a linear equation to express this?
 - (e) Use the plot to determine the distance where you will have spent the same amount as your friend (car + gas).