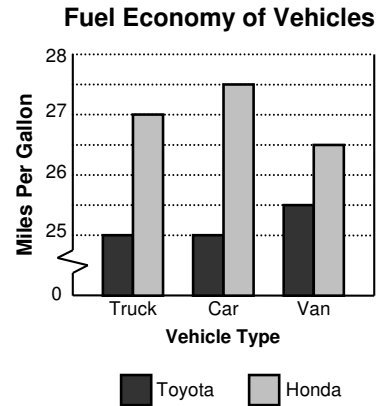


Misleading Graphs: Classwork

1. The bar graph on the right compares the fuel economy of vehicles made by Honda with vehicles made by Toyota.

- a. How much greater is the fuel economy of Honda's truck than the fuel economy of Toyota's truck?
- b. About how many times longer is the bar for the Honda truck than the bar for the Toyota truck?



c. Explain why this graph is misleading.

d. Suppose one of the two companies, Honda or Toyota, made this graph to advertise their vehicles. Which company do you think it was? Explain.

e. On your POD paper, use the data to make another bar graph with a standard vertical scale.

2. Suppose you earn \$7 per week for allowance. You asked five friends how much money they get from their families for allowance each week. You put the data in the table on the right.

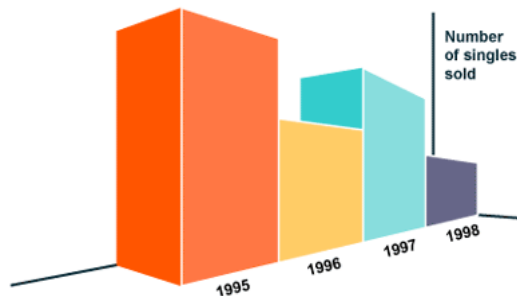
- a. On your POD paper, make a standard bar graph showing all of the allowances.
- b. Suppose you want to show your family that you are being vastly under-paid! Make a bar graph that supports this, but still accurately shows the data. Do this on your POD paper. *Hint: look at the bar graphs in #1 for a strategy!*

Person	\$ per Week
You	7
Selena	8
Paris	8
Lindsey	9
Miley	10
Demi	10

c. Explain the strategy you used to make your graph for part b, and why it is misleading.

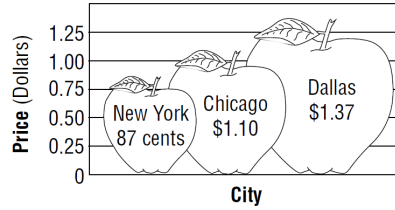
3. The 3-D bar chart on the right shows the number of singles sold by a music artist each year.

What is misleading about the chart?



4. The graph on the right shows the price of apples in different cities. What is misleading about the graph?

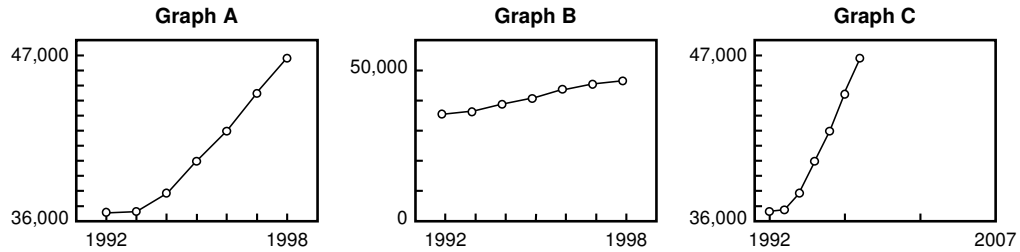
The Price of a Pound of Apples in Selected Cities in September 2000



5. All three line graphs below display the data below on median family income:

Median Family Income in the United States (dollars)

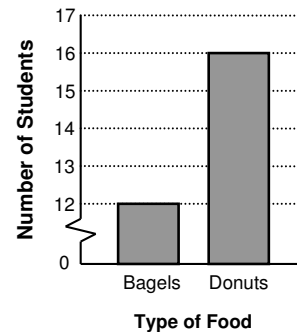
Year	1992	1993	1994	1995	1996	1997	1998
Income	36,573	36,959	38,782	40,611	42,300	44,568	46,737



- a. If the three graphs show the same data, why do they look so different?
- b. Which graph would you use to convince someone that incomes did not change much between 1992 to 1998? Explain your choice.
- c. Which graph would you use to convince someone that incomes greatly increased between 1992 to 1998? Explain your choice.

6. Phil's homeroom won a homeroom breakfast party! They voted on the type of food they want to eat. Phil put the results in the bar graph on the right.

Homeroom Vote



- a. What percent of the students chose Bagels?
- b. What percent of the students chose Donuts?
- c. Explain why this graph is misleading.
- d. Phil has a strong opinion on which food he wants. Based on the graph he made, which do you think Phil would like at the party? Explain your choice.
- e. On your POD paper, use the data to make another bar graph with a standard vertical scale.