BIG Soda Quiz 7 https://thinkingquantitatively.wordpress.com/
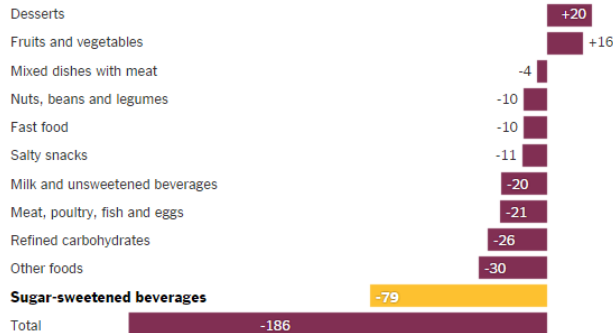
1. In the article, *Decline of Big Soda*, the graphic below shows that from 2004 to 2012 children consumed fewer **sugar-sweetened beverage** calories a day which represented a 4% cut in *calories overall*.

Less Soda, Fewer Calories

The daily total of calories consumed by children is falling, thanks mostly to changing beverage tastes.

Change in daily calories, 2004 to 2012

Desserts	+20
Fruits and vegetables	+16
Mixed dishes with meat	-4
Nuts, beans and legumes	-10
Fast food	-10
Salty snacks	-11
Milk and unsweetened beverages	-20
Meat, poultry, fish and eggs	-21
Refined carbohydrates	-26
Other foods	-30
Sugar-sweetened beverages	-79
Total	-186

Source: University of North Carolina Food Research Center analysis of Centers for Disease Control and Prevention data.

   a. Compute the *calories overall* from this information.
   b. What was the *Total* percent change in *calories overall*?
   c. The article talks about how soda lobbyists made campaign contributions to elected officials to defeat a proposed soda tax. Do you think corporations should be allowed to make campaign contributions and influence public policy in favor of their products? Explain.

2. The article, *Decline of Big Soda*, states that the prevalence of obesity among African-American boys (in Philadelphia) declined by 11.3%, compared with 8.1% for all boys from 2006 to 2013.
   a. The decline in obesity for African-American boys is **what % more than** the decline for all boys?

   b. Compute the yearly average percent change of prevalence of obesity among African-American boys from 2006 to 2013. Note: The total drop was 11.3%, I am looking for the average percent change. If it helps you may use that the obesity rate was 20% in 2006.

   c. Write down an exponential equation that models the decline of obesity for African-American boys in Philadelphia from 2006 to 2013 (assume the obesity rate was 20% in 2006 and use *years since 2006* as the input variable).

   d. Use the equation to predict the obesity rate in 2020.