MATH 181 **NAME _____**

In-class Activity: Misleading Graphs

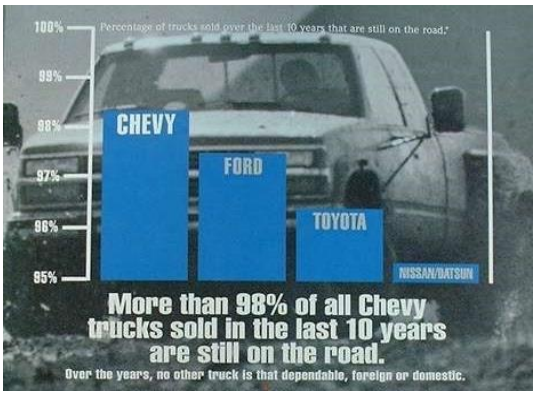
Data Visualization

How to spot a misleading graphic:

1. It may not have axis labels or _____.
2. It may _____the x or y axis, or start at a weird place.
3. It may use_____for bar graphs (called a 'pictograph').

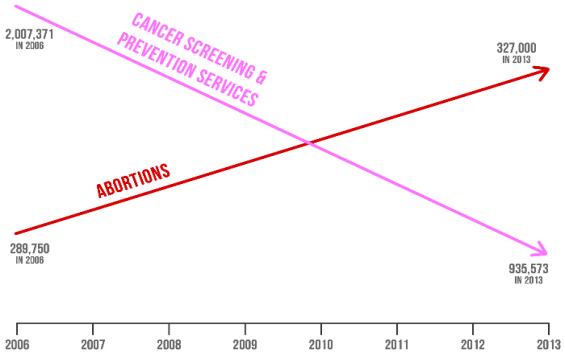
Example 1: "Kobe was a ball hog"

Example 2: "Chevy builds the most dependable trucks"

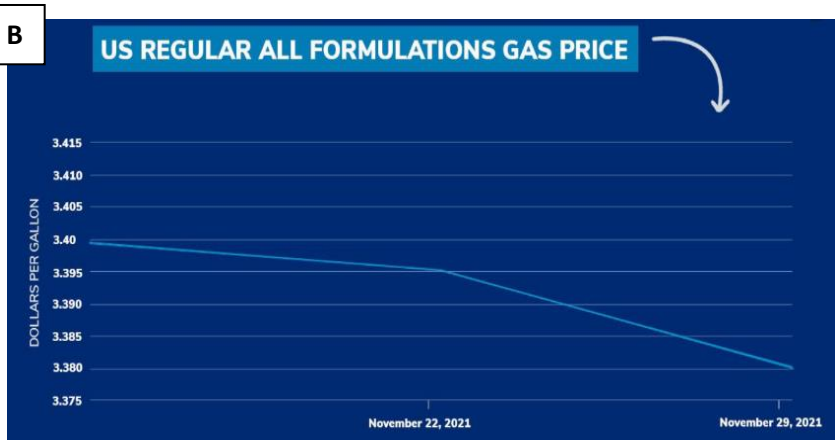


Example from TED-Ed: "How to spot a misleading graph"

A

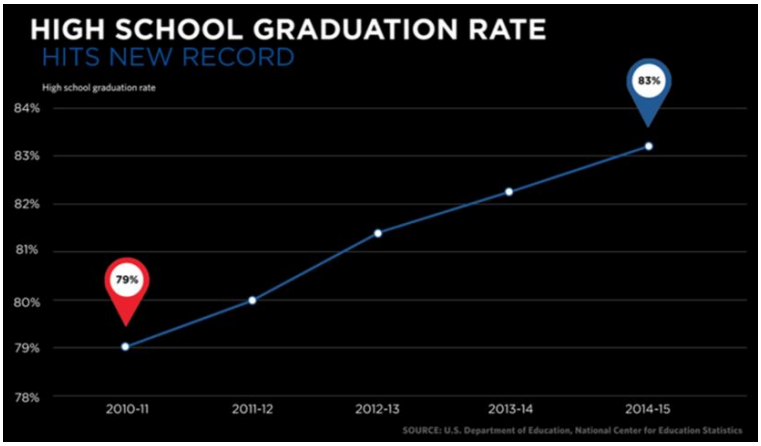


B



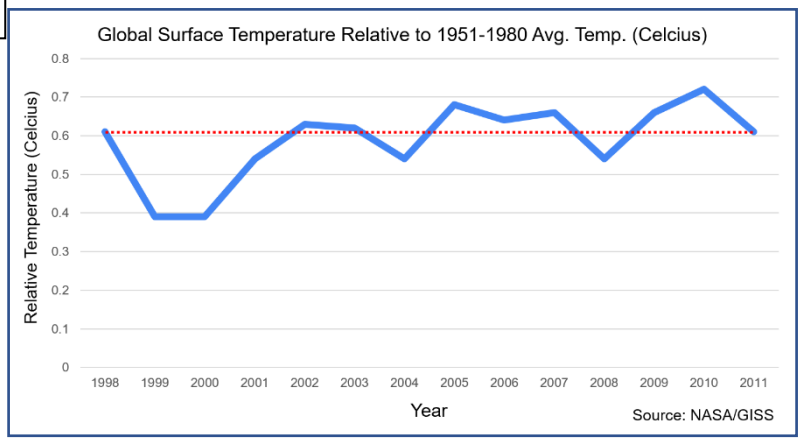
Discussion Question: Graph A was presented by a Republican Congressman during a hearing. Graph B was tweeted by a Democratic House political committee (the DCCC), with the caption: "Thanks, @JoeBiden." Why might each graph be misleading? Explain.

C

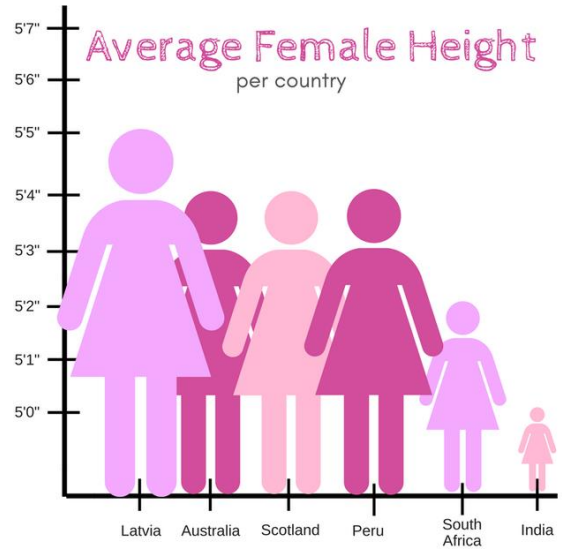


Source link: https://obamawhitehouse.archives.gov/blog/2016/10/17/graduation-rate-reaches-new-high-one-student-shares-his-story

D



E



Graphic found by Sabah Ibrahim on twitter

Graphic 'C' was published on the White House's official blog during the Obama Administration. It uses national school data prepared by the Department of Education.

Graphic 'D' was presented at summit of climate change skeptics. It uses global land-ocean temperature data from NASA's Goddard Institute for Space Studies.

Graphic 'E' was shared on Twitter and has an unknown origin.

For each graph, answer the following questions: Is the visual misleading? Why or why not? If it is misleading, how would you change it?

Graph C:

Graph D:

Graph E: