TODAY'S AGENDA: December 14

- Work on Khan Academy Mission:
  - Data Distributions
- Today's Objective: Small-Group Lesson
  - Students will be able to determine the Effects of Shifting, Adding, and Removing a Data Point
- Today's Standard:
  - Summarize, represent and interpret data on a single count or measurement variable.

Mean: Average (Add everything up / # of things)

9.4

10.7 (up 1.3)

Median: Middle

3, 7, 9, 13, 15, 17

11 (up 2)

Liam works at a zoo. He was looking at some data showing the masses of their 5 African elephants. The mean mass of the elephants was $3{,}800\,\text{kg}$, and the median mass was $3{,}600\,\text{kg}$. The smallest elephant, named Lola, weighed $2{,}700\,\text{kg}$.

Lola then got very sick and lost weight until her mass reached $1{,}800\,\text{kg}$.

How will Lola's mass decreasing affect the mean and median?

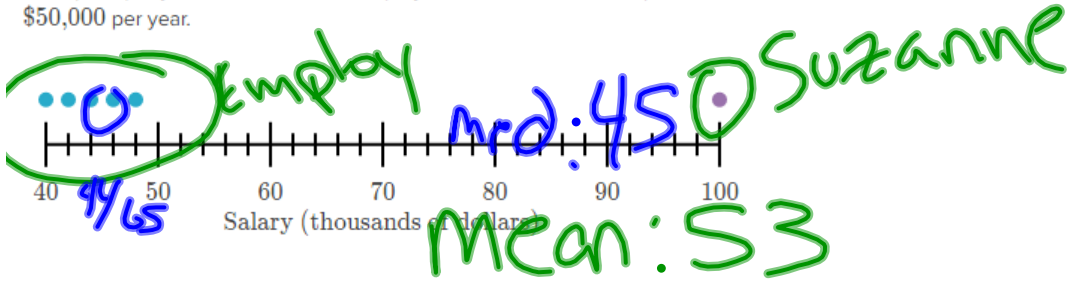
- Both the mean and median will decrease.
- The median will decrease, and the mean will stay the same.
- The mean will decrease, and the median will stay the same.
- The mean will decrease, and the median will increase.

1800 Med Avg

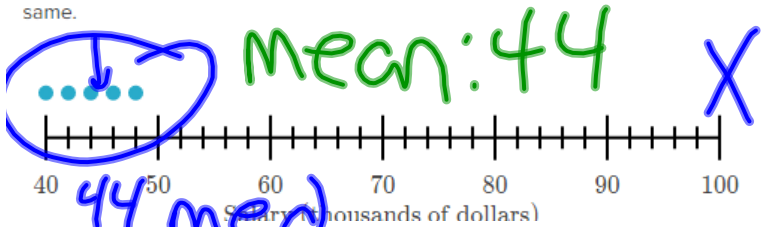
1 X 1 3800 X

2700 3600

Suzanne owns a small business that employs 5 other people. Suzanne makes $100,000 per year, and the other 5 employees make between $40,000 and $50,000 per year.



Suzanne decides to leave the company and keep the other 5 salaries the same.



How will removing Suzanne's salary from the data set affect the mean and median?

- The mean will decrease and the median will increase.
- The median will decrease and the mean will increase.
- Both the mean and median will decrease, but the median will decrease more than the mean.
- Both the mean and median will decrease, but the mean will decrease more than the median.

Brandon works at a small petting zoo with 8 animals. He was looking at some data showing the masses of the animals. Each animal had a different mass between 2 and $160\,\text{kg}$. The zoo then buys a horse that weighs $900\,\text{kg}$ as their 9^{th} animal. *[Show data]*

How does buying the horse affect the mean and median?

- Both the mean and median will increase, but the median will increase by more than the mean.
- Both the mean and median will increase, but the mean will increase by more than the median.
- Both the mean and median will decrease, but the median will decrease by more than the mean.
- Both the mean and median will decrease, but the mean will decrease by more than the median.

Animal	Weight (in kilograms)
chicken	2
duck	3
goose	5
barn cat	7
dog	27
goat	36
lamb	45
pig	160
horse	900

med: 17

avg: 35.7

med: 27 avg: 131