

Statistical Questions

Objective: To learn what a statistical question is and how to ask good questions.



Mean Absolute Deviation (MAD)

The average distance between each data value and the mean for a data set.

- 1) Find the mean
- 2) Determine the deviation (difference) of each number in the data set from the mean (create a table)
- 3) Find the absolute value of the differences found in step 2 (create another column)
- 4) Find the averages of the differences found in step 2

Example - MAD

The table shows the maximum speed of 8 roller coasters.

Max Speed (mph)
58
88
40
60
72
66
80
48

$$\bullet = 512$$

$$n = 8$$

$$\text{mean} = 64$$

mean = 64

Max Speed (mph)	Difference (Mean – Value)	Absolute Value of difference
58	6	6
88	-24	24
40	24	24
60	4	4
72	-8	8
66	-2	2
80	-16	16
48	16	16

• = 100

n = 8

MAD = 12.5

The mean absolute deviation is 12.5 miles per hour. That means that the average distance for each data value from the mean is 12.5 mph.