

Lesson 2-10

Reinforce Understanding

Choose Appropriate Measures

I can choose the best measure of center for a data set based on its shape.

Worked model

Seven ages at a family party are 8, 9, 11, 12, 13, 15, 72. Which center describes them better?

1. Order the values and look for one far from the rest: 72 sits alone above the group.
2. Find the median: the middle of the seven ordered ages is 12.
3. Find the mean: the ages total 140, and sharing that among seven gives 20.
4. The mean now sits above all but one age, so the outlier pulled it away from the group.

Answer: The median, 12, describes a typical age better, because the outlier 72 skews the mean.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Match each data description with the best measure of center.

Write the letter of the matching item on each line.

1. _____ Test scores: 88, 90, 85, 92, 87 (no outliers)
2. _____ Salaries: \$30K, \$32K, \$35K, \$31K, \$250K
3. _____ Race times: 12.1s, 12.3s, 12.0s, 12.2s, 12.1s
4. _____ Goals scored: 1, 2, 1, 0, 2, 1, 15

- AMean
- BMedian
- CMean
- DMedian

2. Sort each feature by which measure of center it supports.

Write the name of the correct group on each line.

Groups: Use Mean Use Median

- _____ No outliers in the data
- _____ Data is symmetric
- _____ All values are close together
- _____ Data has one or more outliers
- _____ Data is skewed to one side
- _____ One extreme value pulls the average