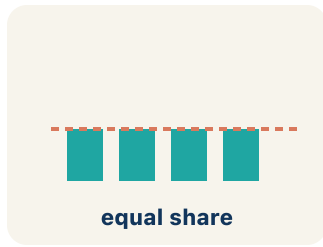


Key Vocabulary Level 2 Standard

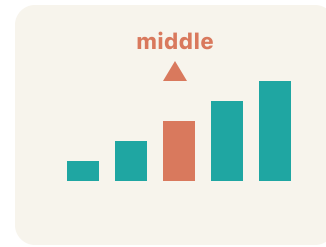
Picture first, then the word, then a plain-language meaning. Say each word out loud.



Mean of 10, 20, 30 = $(10+20+30) \div 3 = 20$

Mean

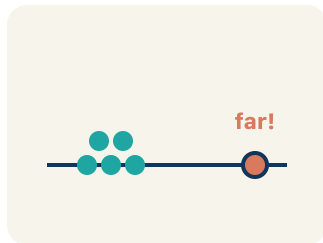
Write the definition:



Data: 5, 8, 12, 15, 20 → median is 12 (the 3rd of 5 values)

Median

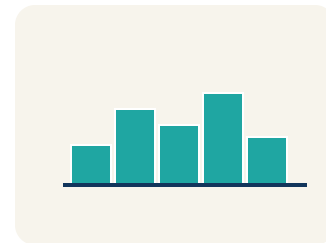
Write the definition:



Data: 12, 14, 13, 15, 45 → 45 is far from the cluster, so it is an outlier

Outlier

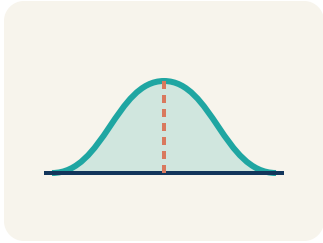
Write the definition:



Scores: 5, 6, 7, 8, 8, 35 → most scores are low, but 35 creates a tail to the right (skewed right)

Skewed

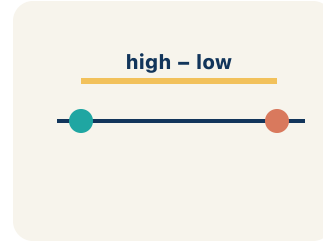
Write the definition:



Symmetric = even on both sides. Skewed = bunched on one side with a tail

Data distribution

Write the definition:



88, 90, 89, 91 (low variability) vs. 50, 70, 95, 100 (high variability)

Variability

Write the definition:

Guided Notes Level 2 Standard



WHAT WE'RE LEARNING TODAY

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



Fill in each blank as we go. Use the Word Bank to help you.



WORD BANK – FILL EACH BLANK WITH THE BEST WORD

Mean

Median

Outlier

Skewed

Data distribution

Variability



Tap any word to see what it means and a picture.

1 The average of a data set is the .

2 The middle value when data is in order, often best when there is an outlier, is the

.

3 A value far from the rest of the data, which can pull the mean, is an

.

4 Data that is bunched on one side with a tail on the other is

.

5 The way data values are spread out is the .

6 How much the data values differ is the .



Watch & Try – Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.

 **I do – watch**


Follow each step as your teacher solves it.

Problem: A gymnast's scores are: 8.5, 8.8, 8.7, 8.6, 8.9. There are no outliers. Which measure best represents a typical score?

- A. Mean
- B. Median
- C. Neither – the data is too small
- D. Both are equally bad

Step 1 The data is symmetric with no outliers, so the mean (8.7) best represents the typical score.

 **Answer:** A. Mean

 **We do – together**

Solve this one with your class using the same steps.

Problem: A runner's mile times are: 7:10, 7:15, 7:12, 7:20, 12:00. The 12:00 was due to a cramp. Which measure best represents a typical mile?

- A. Median – the outlier 12:00 pulls the mean too high
- B. Mean – it uses all the data
- C. Mode – it shows the most common time
- D. Neither measure works

Step 1 _____

Step 2 _____

Answer: _____

 **You do — your turn**

Now try one on your own. Show every step.

Problem: Match each data description with the best measure of center.

Show your work:

Try It

Solve on your own. Check the answer key when you are done.

1. The equipment manager needs to order the MOST COMMON jersey size from this list: M, L, M, S, M, L, M. Which measure answers the question?

- A. Mode, because it names the value that appears most
- B. Mean, because it averages the sizes
- C. Median, because it finds the middle size
- D. Range, because it shows the size gap

Show your work:

2. A coach wants to know how SPREAD OUT the team's free-throw makes are: 6, 7, 6, 8, 18. Which measure of spread is most affected by the lone 18?

- A. Range, because it is the highest minus the lowest value
- B. Median, because it is in the middle
- C. Mode, because it is the most common
- D. Mean absolute deviation only, never the range

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A local newspaper reports that the average home price in a neighborhood is \$450,000. The actual prices are: \$180K, \$200K, \$190K, \$210K, \$195K, \$1,725K. Is the reporter's claim misleading? Calculate the mean and median and explain which better represents a 'typical' home price.

Sentence starter: Mean = _____. Median = _____. The reporter's claim is _____ because the outlier (\$1,725K) pulls the mean _____. The _____ (about \$_____) better represents a typical home price because _____.

Show your work:

Reflect — Exit Ticket

Data set: 15, 18, 16, 17, 15, 72. Which measure of center best represents the data?

- A. Median, because 72 is an outlier
- B. Mean, because it uses all values
- C. Mean, because it is always best
- D. Neither works for this data

Your answer:
