

Lesson 18: Whiteboard Markers Ratings

Tally Tables • Mean
Mode • Median
Percentages



- Amazon is planning to release a new set of colorful whiteboard markers for schools and children. Before selling the markers in stores, the company decided to test them with a group of students.
- Children were invited to use the markers during classroom activities. After testing the markers, each student gave them a rating from 1 to 5 stars.

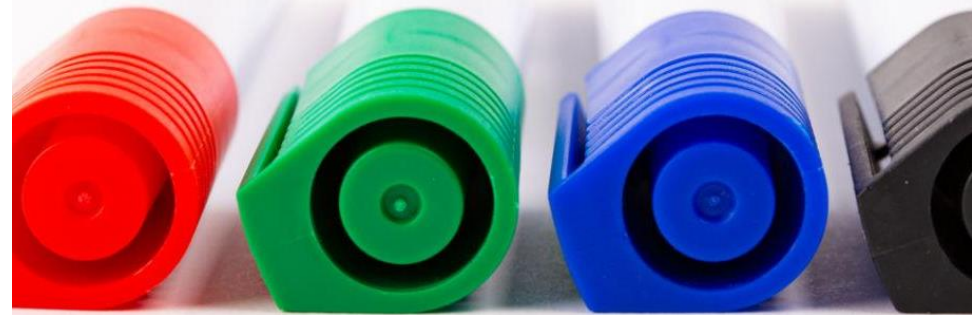


- Amazon collected all the ratings and now wants to study the results carefully. The company hopes to find out whether students liked the markers and whether the product is ready to be sold.
- Your job is to analyze the data and help Amazon make a decision.



Instructions

- Use a whiteboard and marker
- Show all your steps
- Do not guess
- Check your work



Marker Rating Scale

- 1 = Terrible
- 2 = Poor
- 3 = Okay
- 4 = Good
- 5 = Excellent



Survey Results

4, 4, 5, 3, 1, 4, 2, 5, 3, 2
2, 5, 1, 3, 2, 4, 5, 2, 1, 4





Tally Table (Question)

- Create a tally table.
- Every 5 must be crossed correctly.

Tally Table (Answer)

- Rating | Tally | Frequency
- 1 | ||| | 3
- 2 | ~~||||~~ | 5
- 3 | ||| | 3
- 4 | ~~||||~~ | 5
- 5 | |||| | 4



Check Total (Question)

- Add all frequencies.
- Total = _____



Check Total
(Answer)

$$3 + 5 + 3 + 5 + 4 = 20$$

Mode (Question)

- What rating appears most often?
- Mode = _____



Mode (Answer)

- Mode = 2 and 4





Median (Question)

- Put the ratings in order and find the middle.
- Median = _____

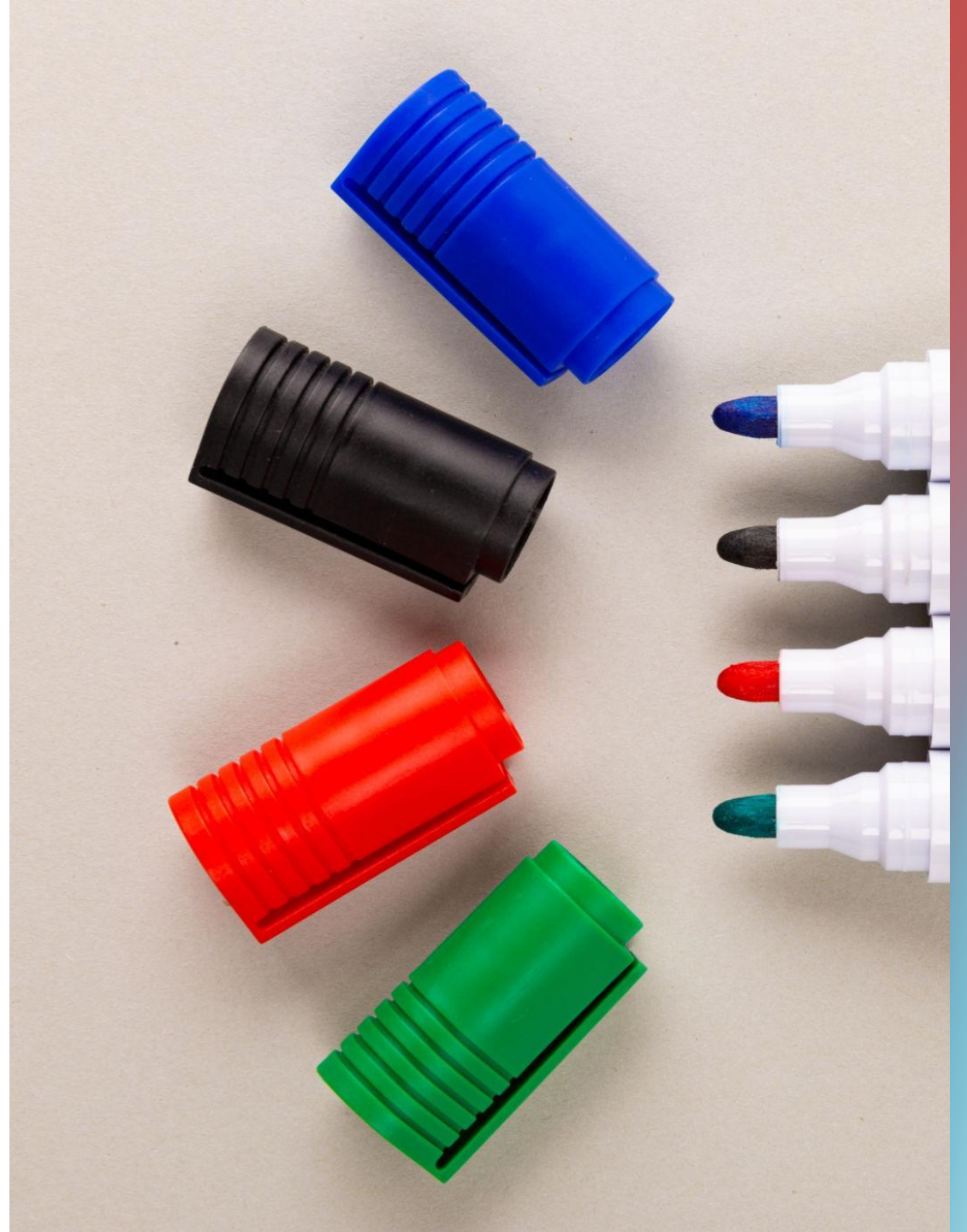


Median (Answer)

- Median = 3

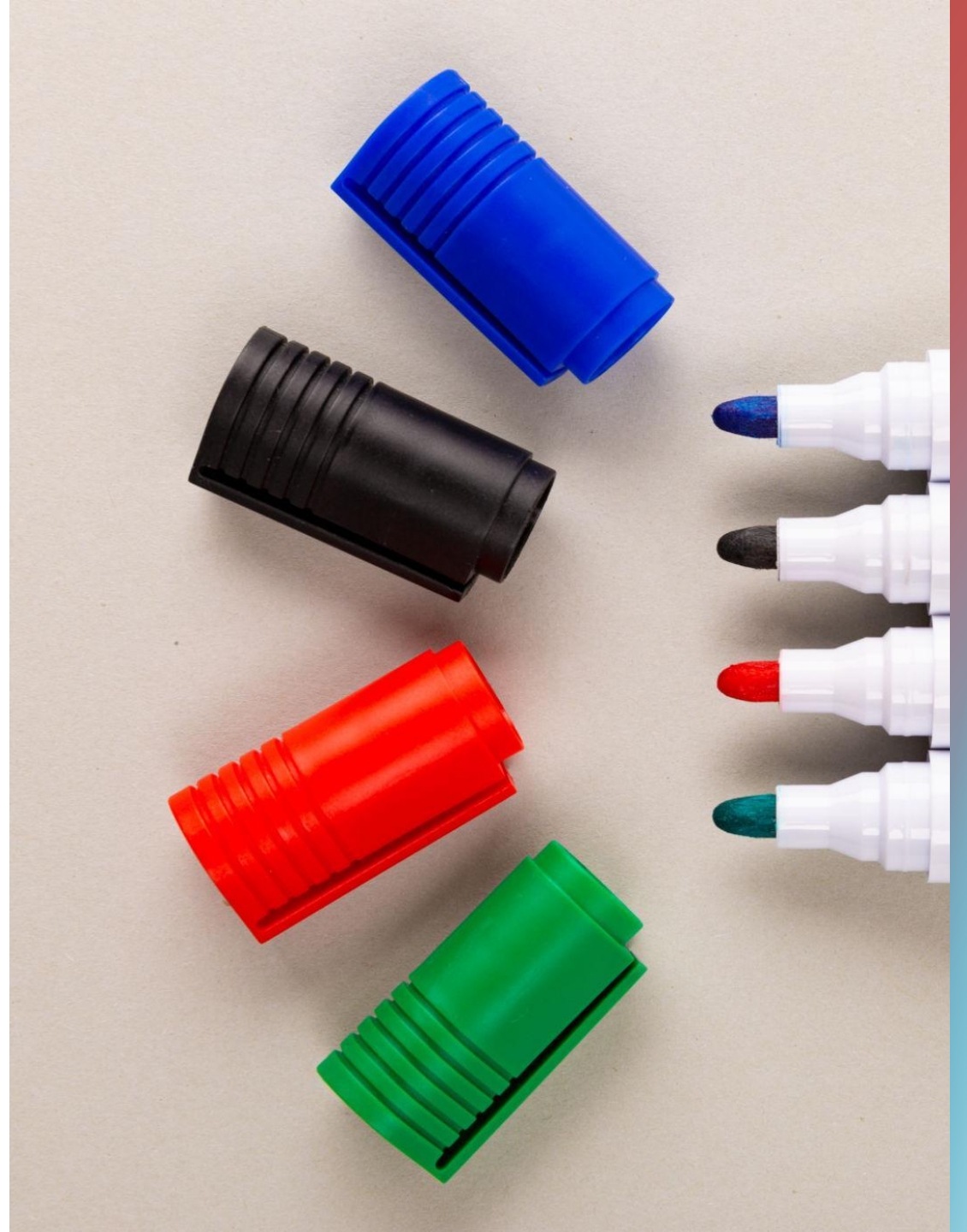
Mean (Question)

- Add all ratings and divide by 20.
- Mean = _____



Mean (Answer)

- Total = 62
- Mean = 3.1



Percentages (Questions)

1. What percentage rated the markers Terrible (1)?
2. What percentage rated it Excellent (5)?
3. What percentage rated it Good (4)?



Percentages (Answers)

1. Terrible: $3/20 = 15\%$
2. Excellent: $4/20 = 20\%$
3. Good: $5/20 = 25\%$





Positive vs Negative Ratings (Questions)

- 1–2 = Negative
 - 3 = Neutral
 - 4–5 = Positive
1. What percentage of ratings are positive?
 2. What percentage are negative?
 3. What percentage are neutral?



Positive vs Negative Ratings (Answers)

1. Positive: $9/20 = 45\%$
2. Negative: $8/20 = 40\%$
3. Neutral: $3/20 = 15\%$



Thinking Questions

1. Do most students like the markers?
2. Should Amazon sell them?
3. What could be improved?



Thinking Answers

1. No, the ratings are mixed.
2. Amazon might want to improve the markers before selling them widely. The ratings are mixed, and many students gave low ratings.
3.
 - The markers might need brighter colors.
 - They may dry out too quickly.
 - The tips may be too thick or too thin.
 - They might be difficult to erase from the whiteboard.
 - The smell could be too strong.



Bar Graph

Create a bar graph using the marker ratings. Put the ratings (1–5) on the bottom axis and the percentages on the left axis.

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