# Count the Claims

Use category counts to test what a claim says.

**S.DA.1.4** "Describe and analyze the distribution of univariate categorical data."

NAME _____ DATE _____

### FITS THE DATA

A true claim matches the category counts. Compare the counts carefully, especially when a claim says most, only, or more than half.

Garden flowers: tulips 8, daisies 4, lilies 3. Claim: Tulips appear most often.

### DOES NOT FIT THE DATA

A false claim conflicts with the category counts. Check every part of the claim before you decide.

Workshop materials: clay 2, wood 6, glass 1. Claim: Clay appears most often.

## 1 SORT

8 items

Circle TRUE or FALSE for each claim, then pick one item from each category and explain how its counts prove your choice.

| | | | |
|---|---|---|---|
| **1.** | Ways to school: walk 8, bus 15, bike 7. Claim: Bus is the most common way. | TRUE | FALSE |
| **2.** | After-school activities: reading 6, sports 6, gaming 3. Claim: Reading and sports tie for most common. | TRUE | FALSE |
| **3.** | Snack choices: crackers 10, popcorn 8, pretzels 4. Claim: Popcorn is more common than crackers. | TRUE | FALSE |
| **4.** | Music choices: jazz 5, pop 12, rock 12. Claim: Pop is the only most common choice. | TRUE | FALSE |
| **5.** | Library choices: comics 11, novels 7, poems 2. Claim: Comics received more than half the 20 choices. | TRUE | FALSE |
| **6.** | Season choices: winter 4, spring 9, summer 6, fall 5. Claim: Spring received fewer choices than summer and fall combined. | TRUE | FALSE |
| **7.** | Shoe colors: black 13, white 9, blue 3. Claim: White accounts for at least half the 25 responses. | TRUE | FALSE |
| **8.** | School event choices: dance 8, movie 5, concert 7. Claim: Dance received fewer than half the 20 votes. | TRUE | FALSE |

## 2 PROVE IT

Explain your thinking

Pick one item from each category and explain how its counts prove your choice.

**ITEM #** _____ **HOW I KNEW** _____

**ITEM #** _____ **HOW I KNEW** _____

## 3 MAKE YOUR OWN

One of each

Write your own set of counts for three categories, then write one TRUE claim and one FALSE claim about those counts.

**TRUE** _____

**FALSE** _____

**CHALLENGE**

Make counts for three categories with a tie for most common, then write a TRUE claim about the tie and explain why it is true.

**ANSWER KEY** # Count the Claims

**HIGH SCHOOL · S.DA.1.4**

## PART 1 · SORT

| # | ITEM | CATEGORY | WHY |
|---|---|---|---|
| 1 | Ways to school: walk 8, bus 15, bike 7. Claim: Bus is the most common way. | **TRUE** | Bus has 15 responses, more than either other category. |
| 2 | After-school activities: reading 6, sports 6, gaming 3. Claim: Reading and sports tie for most common. | **TRUE** | Reading and sports each have the highest count, 6. |
| 3 | Snack choices: crackers 10, popcorn 8, pretzels 4. Claim: Popcorn is more common than crackers. | **FALSE** | Popcorn has 8 responses, fewer than crackers' 10. |
| 4 | Music choices: jazz 5, pop 12, rock 12. Claim: Pop is the only most common choice. | **FALSE** | Pop and rock tie at 12, so pop is not the only most common choice. |
| 5 | Library choices: comics 11, novels 7, poems 2. Claim: Comics received more than half the 20 choices. | **TRUE** | Half of 20 is 10, and comics received 11 choices. |
| 6 | Season choices: winter 4, spring 9, summer 6, fall 5. Claim: Spring received fewer choices than summer and fall combined. | **TRUE** | Spring has 9 choices; summer and fall have 11 combined. |
| 7 | Shoe colors: black 13, white 9, blue 3. Claim: White accounts for at least half the 25 responses. | **FALSE** | White accounts for 9 of 25 responses, which is less than half. |
| 8 | School event choices: dance 8, movie 5, concert 7. Claim: Dance received fewer than half the 20 votes. | **TRUE** | Dance received 8 votes, fewer than half of 20. |

## PART 2 · PROVE IT

**Task:** Pick one item from each category and explain how its counts prove your choice.
Accept any explanation that names the deciding feature from the rule box for the chosen item.

## PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **TRUE**: Art supplies: pencils 10, markers 6, paint 4. Claim: Pencils were chosen more often than markers.
- **FALSE**: Art supplies: pencils 10, markers 6, paint 4. Claim: Paint was chosen more often than markers.

**Challenge:** Book genres: mystery 9, fantasy 9, history 4. Mystery and fantasy tie for most common because each has 9 votes, more than history.

Accept explanations that compare the relevant counts or fractions correctly. For Part 3, each claim must match its label and use the student's stated counts.