LESSON MAKER PRO

Step Spotters

Use category counts to solve and explain one- and two-step problems.

GRADE 3 · TEKS 3.8.B

3.8.B "solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals."

NAME _____ DATE _____

COUNT THE STEPS

Read each category count from its frequency table. A comparison or a total of two counts can use one calculation. Combining three counts can use two additions. Show a valid calculation plan and the answer.

WORKED EXAMPLE

A sample snack vote has Apple 5, Banana 3 and Pear 4. Find how many more votes Apple has than Banana, then find the total.

Snack	Votes
Apple	5
Banana	3
Pear	4

1. Compare: 5−3=2, one subtraction.
2. Total: 5+3=8; 8+4=12, two additions.

Answer: 2 more votes; 12 votes in all.

PRACTICE 8 problems

1 How many more Banana votes than Apple votes? Solve and show a calculation plan. State whether your plan uses one or two calculations.

SURVEY 1

Fruit	Votes
Apple	2
Banana	5

ANSWER _____

2 How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.

SURVEY 2

Fruit	Votes
Apple	1
Banana	3
Pear	2

ANSWER _____

3 How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.

SURVEY 3

Fruit	Votes
Apple	4
Banana	1

ANSWER _____

4 How many more Banana votes than Apple votes? Solve and show a calculation plan. State whether your plan uses one or two calculations.

SURVEY 4

Fruit	Votes
Apple	2
Banana	6

ANSWER _____

5 How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.

SURVEY 5

Fruit	Votes
Apple	2
Banana	5
Pear	3

ANSWER _____

6 How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.

SURVEY 6

Fruit	Votes
Apple	4
Banana	2
Pear	5

ANSWER _____

7 How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.

SURVEY 7

Fruit	Votes
Apple	3
Banana	3

ANSWER _____

8 How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.

SURVEY 8

Fruit	Votes
Apple	3
Banana	1
Pear	4

ANSWER _____

APPLY IT Show your work

1 Choose two practice items. For each one, identify the item and explain how you knew where it belonged.

2 Using any one practice table, write and solve one new one-step question. Using a three-category table, write and solve one new two-step question.

CHALLENGE One step up

Create a frequency table for three fruit categories with whole-number vote counts. Write and solve a two-step question about it.

FRUIT	VOTES

ANSWER KEY # Step Spotters

GRADE 3 · TEKS 3.8.B

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	How many more Banana votes than Apple votes? Solve and show a calculation plan. State whether your plan uses one or two calculations.	**ONE STEP. Read 5 and 2, then subtract once. Answer: 3.**
2	How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.	**TWO STEPS. Add 1 + 3, then add 2. Answer: 6.**
3	How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.	**ONE STEP. Add 4 + 1 once. Answer: 5.**
4	How many more Banana votes than Apple votes? Solve and show a calculation plan. State whether your plan uses one or two calculations.	**ONE STEP. Read 6 and 2, then subtract once. Answer: 4.**
5	How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.	**TWO STEPS. Add 2 + 5, then add 3. Answer: 10.**
6	How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.	**TWO STEPS. Add 4 + 2, then add 5. Answer: 11.**
7	How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.	**ONE STEP. Add 3 + 3 once. Answer: 6.**
8	How many votes altogether? Solve and show a calculation plan. State whether your plan uses one or two calculations.	**TWO STEPS. Add 3 + 1, then add 4. Answer: 8.**

PART 2 · APPLY IT

1. **For example: Item 1: ONE STEP. Read 5 and 2, then subtract once. Item 2: TWO STEPS. Add 1 + 3, then add 2.** Accept any two correct explanations using the displayed data and the rule.
2. **Example using Survey 5: Apple and Pear together 2+3=5. Total 2+5+3=10, using two additions.** Both student questions must match the referenced categorical counts.

CHALLENGE

Example Apple 2, Banana 3, Pear 4; total 2+3+4=9 using two additions.

Practice answers: 3,6,5,4,10,11,6,8. Accept mathematically valid alternative plans; classifying a plan must not replace solving. These are categorical frequency tables, not numerical value plots.