

Graph Data Detectives

Read graph data, then add or subtract to solve.

GRADE 3 • 3.PS.1.e.v

3.PS.1.e.v "Analyze data represented in pictographs and bar graphs, and communicate results orally and in writing: solve one- and two-step addition and subtraction problems using data from pictographs and bar graphs."

NAME _____

DATE _____

PRACTICE: READ THE DATA

Use the key in a pictograph to find what each picture is worth. Add groups to find a total. Subtract to find how many more or how many fewer.

WORKED EXAMPLE

At a pet fair, the pictograph key says each ● stands for 9 pets. Rabbits: ●●●●. Turtles: ●●. How many more rabbits than turtles?

1. Rabbits: 4 groups of 9 = 36.
2. Turtles: 2 groups of 9 = 18.
3. Subtract: $36 - 18 = 18$.

Answer: 18 more rabbits

PRACTICE 6 problems

- 1** Pictograph key: each ★ = 3 votes. Green design: ★★★★★. How many votes did the green design get?

ANSWER _____

- 2** Bar graph: Dance Club, 17 students; Chess Club, 11 students. How many more students chose Dance Club?

ANSWER _____

- 3** Bar graph: Bananas, 16 votes; Oranges, 7 votes. How many votes were there altogether?

ANSWER _____

- 4** Pictograph key: each ■ = 7 cans. Library: ■■■■■. Office: ■■■. How many more cans did the library collect?

ANSWER _____

- 5** Bar graph: Bus Riders, 25 students; Walkers, 13 students. How many fewer students walked than rode the bus?

ANSWER _____

- 6** Bar graph: Red Team, 14 points; Yellow Team, 8 points; Blue Team, 19 points. How many more points did Red Team and Yellow Team score together than Blue Team?

ANSWER _____

APPLY IT Show your work

- 1** APPLY: A cafeteria survey bar graph shows Pretzels, 28 votes; Popcorn, 19 votes; Fruit Cups, 13 votes. The cafeteria will prepare pretzels and fruit cups. How many more votes did those two foods get together than popcorn?

WORK SPACE

ANSWER _____

- 2** APPLY: A sticker contest pictograph has this key: each • = 6 votes. Dragon sticker: ●●●●●. Rocket sticker: ●●●●●●. How many more votes did the rocket sticker get?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

CHALLENGE: A game-day bar graph shows Team A, 26 points; Team B, 17 points; Team C, 21 points. The teams want to score 75 points altogether. How many more points do they need? Explain how you found your answer.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Pictograph key: each ★ = 3 votes. Green design: ★★★★★. How many votes did the green design get?	15 votes
2	Bar graph: Dance Club, 17 students; Chess Club, 11 students. How many more students chose Dance Club?	6 more students
3	Bar graph: Bananas, 16 votes; Oranges, 7 votes. How many votes were there altogether?	23 votes
4	Pictograph key: each ■ = 7 cans. Library: ■■■■■. Office: ■■■. How many more cans did the library collect?	14 more cans
5	Bar graph: Bus Riders, 25 students; Walkers, 13 students. How many fewer students walked than rode the bus?	12 fewer students
6	Bar graph: Red Team, 14 points; Yellow Team, 8 points; Blue Team, 19 points. How many more points did Red Team and Yellow Team score together than Blue Team?	3 more points

PART 2 • APPLY IT

- 22 more votes** Add the pretzel and fruit cup votes: $28 + 13 = 41$. Then subtract the popcorn votes: $41 - 19 = 22$.
- 12 more votes** The dragon sticker got 30 votes, and the rocket sticker got 42 votes. Subtract: $42 - 30 = 12$.

CHALLENGE

11 more points. $26 + 17 + 21 = 64$, and $75 - 64 = 11$.

Accept correct answers written as numerals or number words. For the challenge, accept any explanation that adds to 64 points and subtracts from 75 to get 11.