

Graph Detective

Read graph scales and solve data questions.

GRADE 3 • 3.MD.B

CCSS.Math.Content.3.MD.B "Represent and interpret data."

NAME _____

DATE _____

USE THE SCALE

The scale tells what each square, bar section, or picture stands for. Multiply the number of sections by the scale to find the total. To compare two amounts, find each total and subtract.

WORKED EXAMPLE

A score bar reaches 7 squares. Each square stands for 4 points. How many points does the bar show?

1. Count the squares: 7.
2. Each square is worth 4 points.
3. Multiply: $7 \times 4 = 28$.

Answer: 28 points

PRACTICE 6 problems

- 1** A bar graph uses a scale of 5 books for each square. The Adventure bar is 6 squares tall. How many books does it show?

ANSWER _____

- 2** A snack graph uses 1 mark = 2 votes. Popcorn has 8 marks. Pretzels have 3 marks. How many more votes did Popcorn receive?

ANSWER _____

- 3** A bar graph uses a scale of 3 laps for each square. Jordan's bar reaches 9 squares. How many laps did Jordan run?

ANSWER _____

- 4** A bar graph uses a scale of 10 shells for each square. A category has 50 shells. How many squares tall should its bar be?

ANSWER _____

- 5** Each picture in a graph stands for 6 balloons. A class has 5 pictures. How many balloons does the class have?

ANSWER _____

- 6** A bar graph uses a scale of 3 points for each square. Red Team has 9 squares. Blue Team has 6 squares. How many points do the teams have altogether?

ANSWER _____

APPLY IT Show your work

- 1** At the school game club, a bar graph uses a scale of 3 players for each square. The Puzzle Games bar is 8 squares tall. The Racing Games bar is 5 squares tall. How many more players chose Puzzle Games?

WORK SPACE

ANSWER _____

- 2** The Animal Helpers Club made a bar graph for a pet-supply drive. Each square stands for 5 cans. The dog food bar is 6 squares tall, and the cat food bar is 3 squares tall. How many cans did the club collect altogether?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A sticker graph uses a scale of 6 stickers for each square. Ava has 5 squares, and Ben has 3 squares. Ava says, "I have 12 more stickers than Ben." Is Ava correct? Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A bar graph uses a scale of 5 books for each square. The Adventure bar is 6 squares tall. How many books does it show?	30 books
2	A snack graph uses 1 mark = 2 votes. Popcorn has 8 marks. Pretzels have 3 marks. How many more votes did Popcorn receive?	10 more votes
3	A bar graph uses a scale of 3 laps for each square. Jordan's bar reaches 9 squares. How many laps did Jordan run?	27 laps
4	A bar graph uses a scale of 10 shells for each square. A category has 50 shells. How many squares tall should its bar be?	5 squares
5	Each picture in a graph stands for 6 balloons. A class has 5 pictures. How many balloons does the class have?	30 balloons
6	A bar graph uses a scale of 3 points for each square. Red Team has 9 squares. Blue Team has 6 squares. How many points do the teams have altogether?	45 points

PART 2 • APPLY IT

- 9 more players** Puzzle Games has $8 \times 3 = 24$ players. Racing Games has $5 \times 3 = 15$ players, and $24 - 15 = 9$.
- 45 cans** The dog food total is $6 \times 5 = 30$ cans, and the cat food total is $3 \times 5 = 15$ cans. Add $30 + 15$ to get 45 cans.

CHALLENGE

Yes. Ava has 30 stickers and Ben has 18 stickers. $30 - 18 = 12$, so Ava has 12 more stickers.

Accept answers with correct units, such as "10" or "10 more votes" when the question asks for a difference. For the challenge, accept any explanation that shows each graph total and a correct subtraction.