LESSON MAKER PRO

Graph Detective

Use scaled graphs to compare groups.

GRADE 3 · 3.DA.A.16

3.DA.A.16 "For a given or collected set of data, create a scaled (one-to-many) picture graph and scaled bar graph to represent a data set with several categories. a. Determine a simple probability from a context that includes a picture. b..."

NAME _____ DATE _____

READ THE SCALE

In a picture graph, use the key to find how many each picture stands for. In a bar graph, use the scale to find each bar's value. To find how many more or fewer, subtract. If you need to compare a group with two groups together, add first.

WORKED EXAMPLE

How many more turtle stickers than rabbit stickers are shown?

Animal Stickers

Turtles	★★★★★★
Rabbits	★★★★

Key: ★ = 3 stickers

1. Turtles: 6 × 3 = 18 stickers.
2. Rabbits: 4 × 3 = 12 stickers.
3. Subtract: 18 - 12 = 6.

Answer: 6 more turtle stickers

PRACTICE 6 problems

1 How many more comet stickers than moon stickers are shown?

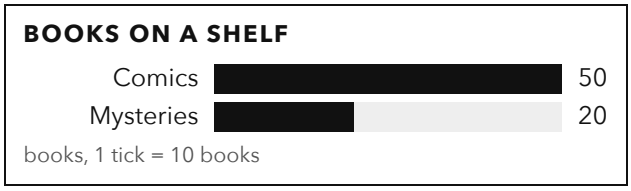
Space Stickers

Moon	★★
Comet	★★★★★★

Key: ★ = 5 stickers

ANSWER _____

2 How many more comics than mysteries are on the shelf?



ANSWER _____

3 How many fewer students chose hopscotch than swings?

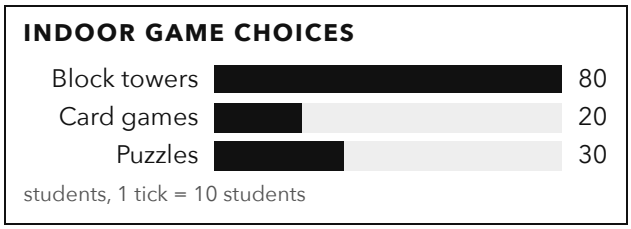
Playground Choices

Swings	● ● ● ● ● ● ● ●
Slides	● ● ● ● ●
Hopscotch	● ●

Key: ● = 10 students

ANSWER _____

4 How many more students chose block towers than card games and puzzles together?



ANSWER _____

5 How many more fantasy and animal books are there together than sports books?

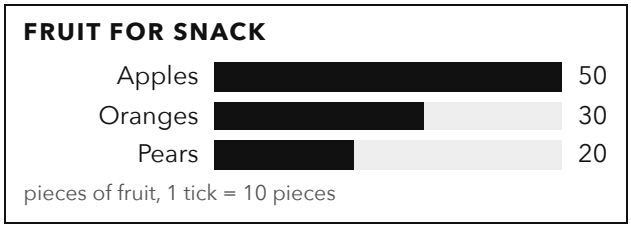
Classroom Books

Fantasy	■ ■ ■ ■ ■ ■ ■ ■
Animal	■ ■
Sports	■ ■ ■ ■ ■ ■

Key: ■ = 5 books

ANSWER _____

6 How many fewer pears than apples are there? How many apples and oranges are there together?



ANSWER _____

APPLY IT Show your work

1 Students voted for a carnival activity. After the graph was made, 10 more students voted for ring toss. How many more students chose face paint than ring toss then?



ANSWER _____

2 A class puts the prize tokens shown in a bag and mixes them. How many more blue tokens than red tokens are in the bag? What is the probability of picking a blue token? Write the probability as a fraction.

Prize Tokens

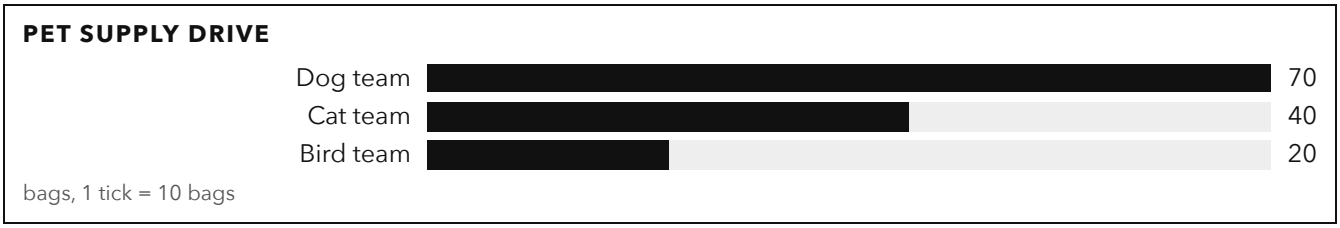
Red	◆ ◆
Blue	◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆
Green	◆ ◆ ◆ ◆ ◆ ◆

Key: ◆ = 5 tokens

ANSWER _____

CHALLENGE One step up

The cat team and the bird team each collect 10 more bags after this graph is made. Will their new combined total be greater than the dog team's total? If so, by how many bags? Show how you know.



WORK SPACE AND ANSWER

ANSWER KEY

Graph Detective

GRADE 3 · 3.DA.A.16

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	How many more comet stickers than moon stickers are shown?	**20 more comet stickers**
2	How many more comics than mysteries are on the shelf?	**30 more comics**
3	How many fewer students chose hopscotch than swings?	**60 fewer students**
4	How many more students chose block towers than card games and puzzles together?	**30 more students**
5	How many more fantasy and animal books are there together than sports books?	**20 more books**
6	How many fewer pears than apples are there? How many apples and oranges are there together?	**30 fewer pears; 80 apples and oranges together**

PART 2 · APPLY IT

1. **10 more students** Ring toss has 30 + 10 = 40 votes after the new votes. Face paint has 50 - 40 = 10 more votes.
2. **30 more blue tokens; probability 1/2** There are 40 blue tokens and 10 red tokens, so the difference is 30. There are 80 tokens in all, and 40/80 = 1/2 are blue.

CHALLENGE

Yes, by 10 bags. The cat and bird teams have (40 + 10) + (20 + 10) = 80 bags, which is 10 more than 70.

Accept equivalent wording that gives the correct difference and identifies the groups being compared. For the probability, accept 40/80 or 4/8 as well as 1/2.