LESSON MAKER PRO

Graphs That Count

Turn data into scaled graphs

GRADE 3 · 3.DS.A.1.a

3.DS.A.1.a "Create a scaled data visualization (e.g., picture graph, bar graph for categorial data; line plot with fraction units of halves and fourths for numerical data) to display collected or given data."

NAME _____ DATE _____

THE BIG IDEA

In a scaled graph, one picture or one space stands for more than one item. Choose a scale, label each category, and show the correct number of pictures or spaces.

WORKED EXAMPLE

Use the bar graph to make a picture graph. Let 1 picture = 3 cards.

CARDS COLLECTED

Sun | 3
Moon ▮ 9

cards

1. Sun: 3 cards ÷ 3 = 1 picture.
2. Moon: 9 cards ÷ 3 = 3 pictures.
3. Label both rows and write the key.

Answer: Key: 1 picture = 3 cards. Sun: 1 picture. Moon: 3 pictures.

PRACTICE 4 problems

1 Draw a labeled picture graph. Key: 1 picture = 2 votes. Cats: 4 votes. Dogs: 8 votes.

ANSWER _____

2 Draw a labeled picture graph. Key: 1 picture = 4 books. Comics: 12 books. Mysteries: 16 books.

ANSWER _____

3 Draw a labeled bar graph. Let each space stand for 5 points. Blue: 10 points. Green: 20 points.

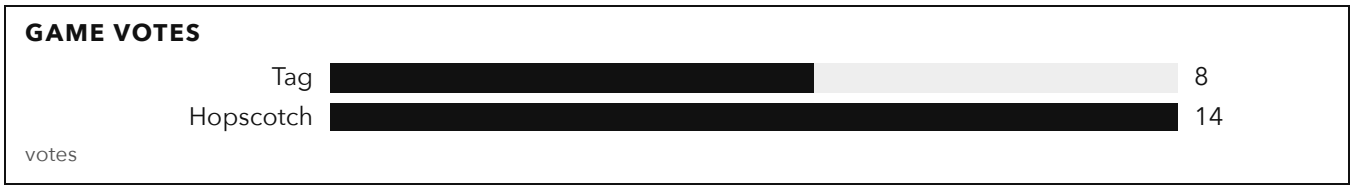
ANSWER _____

4 Draw a labeled bar graph. Choose a scale that counts by 2 or 4. Red: 8 points. Gold: 16 points.

ANSWER _____

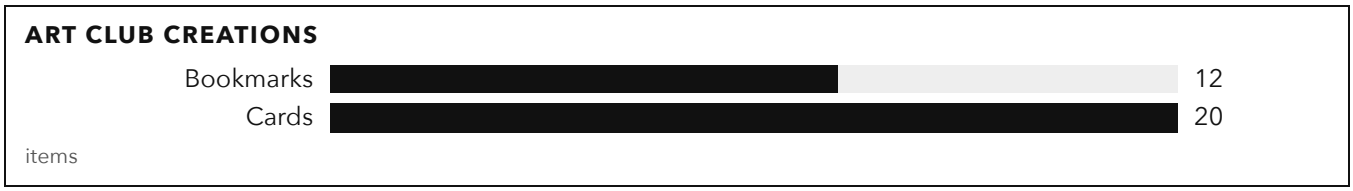
APPLY IT Show your work

1 Your class is picking a game for recess. Use the bar graph to make a picture graph. Let 1 picture = 2 votes.



ANSWER _____

2 Students counted what they made at an art club. Use the bar graph to make a picture graph. Let 1 picture = 4 items.



ANSWER _____

CHALLENGE One step up

Draw a picture graph for 6 stars, 10 moons, and 14 suns. Use 1 whole picture = 4 and half a picture = 2. Label the key.

WORK SPACE AND ANSWER

ANSWER KEY

Graphs That Count

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Draw a labeled picture graph. Key: 1 picture = 2 votes. Cats: 4 votes. Dogs: 8 votes.	**Cats: 2 pictures. Dogs: 4 pictures. Key: 1 picture = 2 votes.**
2	Draw a labeled picture graph. Key: 1 picture = 4 books. Comics: 12 books. Mysteries: 16 books.	**Comics: 3 pictures. Mysteries: 4 pictures. Key: 1 picture = 4 books.**
3	Draw a labeled bar graph. Let each space stand for 5 points. Blue: 10 points. Green: 20 points.	**Blue: 2 spaces. Green: 4 spaces. Scale: 1 space = 5 points.**
4	Draw a labeled bar graph. Choose a scale that counts by 2 or 4. Red: 8 points. Gold: 16 points.	**Scale of 2: Red 4 spaces, Gold 8 spaces. Or scale of 4: Red 2 spaces, Gold 4 spaces.**

PART 2 · APPLY IT

1. **Tag: 4 pictures. Hopscotch: 7 pictures. Key: 1 picture = 2 votes.** Divide each bar's value by 2 to find its number of pictures.
2. **Bookmarks: 3 pictures. Cards: 5 pictures. Key: 1 picture = 4 items.** Divide each bar's value by 4 to find its number of pictures.

CHALLENGE

Stars: 1 whole and 1 half picture. Moons: 2 wholes and 1 half. Suns: 3 wholes and 1 half. Key: 1 whole picture = 4; 1 half picture = 2.

Accept any clearly labeled graph with the stated scale and correct amounts. Picture symbols may vary.