

Picture Data Builders

Build complete pictographs with four different keys.

GRADE 3 • 3.PS.1.c

3.PS.1.c "Organize and represent a data set using pictographs that include an appropriate title, labeled axes, and key. Each pictograph symbol should represent 1, 2, 5 or 10 data points."

NAME _____

DATE _____

BUILD A COMPLETE PICTOGRAPH

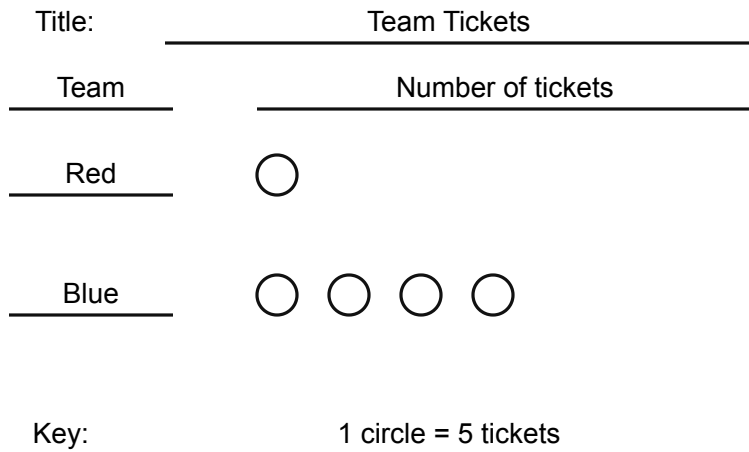
A pictograph uses equal-sized symbols. Each symbol has the value named in its key. Divide each count by that value to find how many whole symbols to draw. Give the graph a title and label its categories and data.

WORKED EXAMPLE

Red has 5 tickets and Blue has 20. Show the data with 1 circle = 5 tickets.

- 5 divided by 5 is 1 circle; 20 divided by 5 is 4 circles.
- Add a title, both labels, category names and the key.

Answer: The completed pictograph shows 25 tickets with 5 circles.



PRACTICE 4 problems

1 Bead collection: Blue: 4 beads;
Green: 6 beads. Build a pictograph
using 1 circle = 1 bead. Add a title,
labels for the category and data
columns, category names and the
key.

ANSWER _____

Title: _____

Key: _____

2 Shell collection: Round: 8 shells;
Spiral: 12 shells. Build a pictograph
using 1 circle = 2 shells. Add a title,
labels for the category and data
columns, category names and the
key.

ANSWER _____

Title: _____

Key: _____

3

Library returns: Stories: 10 books; Facts: 15 books. Build a pictograph using 1 circle = 5 books. Add a title, labels for the category and data columns, category names and the key.

ANSWER

Title:

Key:

4

Class tickets: Red: 20 tickets; Blue: 30 tickets. Build a pictograph using 1 circle = 10 tickets. Add a title, labels for the category and data columns, category names and the key.

ANSWER

Title:

Key:

APPLY IT Show your work

- 1** Use your Shell collection pictograph. Count its symbols and use its key to find the total shells. Explain aloud why counting symbols alone gives a different number.

WORK SPACE

- 2** Use the Library returns data. Could 1 circle = 10 books show both categories using only whole circles? Explain.

WORK SPACE

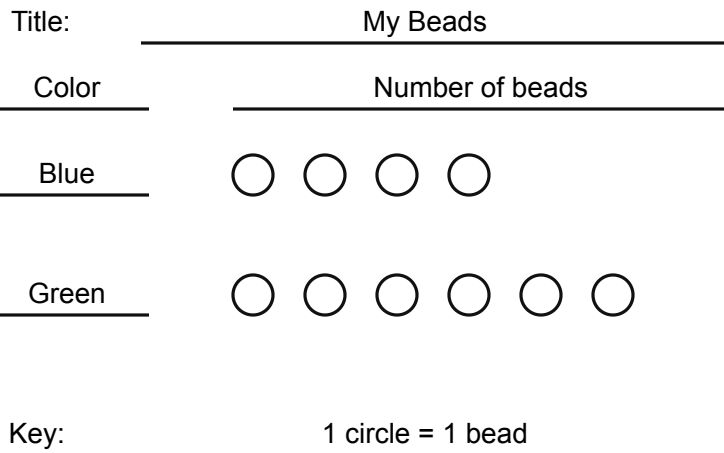
CHALLENGE One step up

Use Class tickets. A partner makes the Blue row with 3 circles and writes 1 circle = 1 ticket. Correct the key to match the data. Explain how you checked.

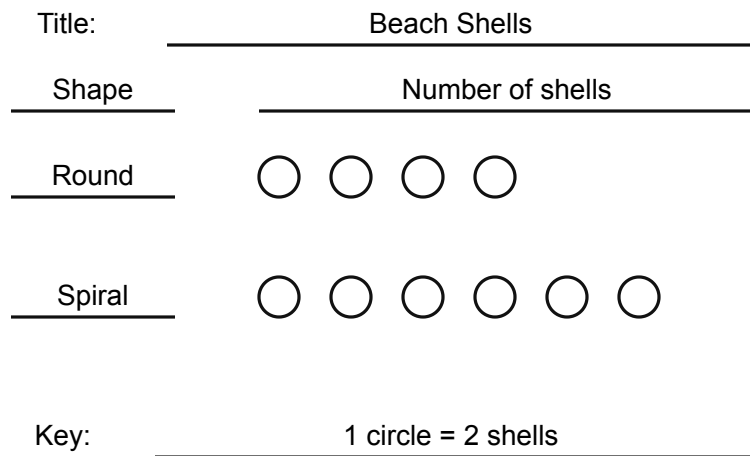
Check actual student drawings: complete title, category/data labels, category names, consistent symbol size, exact symbol counts and a key. Accept sensible alternative titles and equivalent axis wording. All four required symbol values are used. Answers print only on the key. One answer line below each construction may be used to record the total; the graph is the main response.

PRACTICE 1

Example title: My Beads. Labels: Color; Number of beads. Blue: 4 circles; Green: 6 circles. Key: 1 circle = 1 bead.

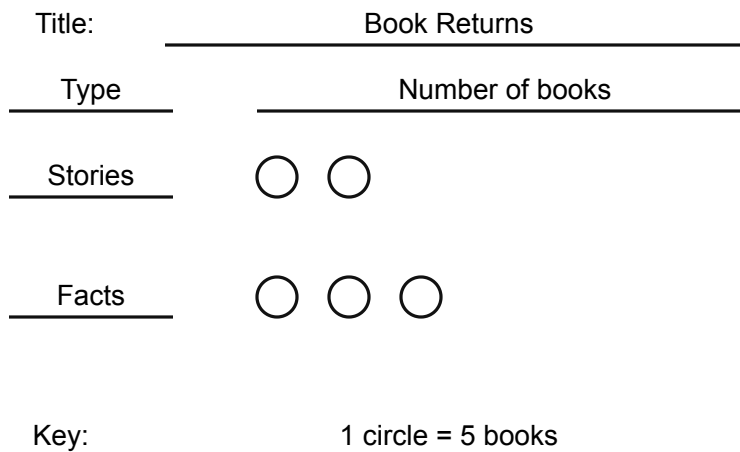
**PRACTICE 2**

Example title: Beach Shells. Labels: Shape; Number of shells. Round: 4 circles; Spiral: 6 circles. Key: 1 circle = 2 shells.

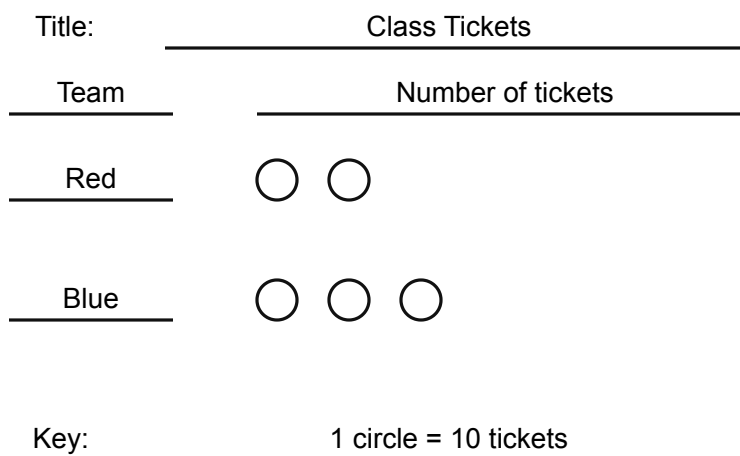


PRACTICE 3

Example title: Book Returns. Labels: Type; Number of books. Stories: 2 circles; Facts: 3 circles. Key: 1 circle = 5 books.

**PRACTICE 4**

Example title: Class Tickets. Labels: Team; Number of tickets. Red: 2 circles; Blue: 3 circles. Key: 1 circle = 10 tickets.

**APPLY IT 1**

10 symbols; 20 shells. Each symbol stands for 2 shells.
 $4 + 6 = 10$ circles; 10 groups of 2 is 20.

APPLY IT 2

No. The 15 fact books would need one and a half circles, so whole circles alone cannot represent that count.
 10 books is 1 circle, but 15 is not a whole-number multiple of 10.

CHALLENGE

The key must be 1 circle = 10 tickets: 3 circles represent 30 tickets.