3 Develop the Concept

3 Independent Practice

Remind students that picture graphs use symbols or pictures to represent data. Use Exercise 9 as an example. ***What symbol represents data in this picture graph?*** [A small stick person] ***What does the key tell you that each stick person represents?*** [1 million people]

Exercise 10

Language of Math: Identify Relationships Help students recognize words that signal the operation that could be used to solve the problem. ***What operation does the word difference suggest that you could do to solve this problem?*** [Subtract]

Exercise 15

Help students determine what to add to complete the picture graph. ***What kind of pictures will you draw to complete the picture graph?*** [1 can for every 100 cans collected] ***How many cans will you draw for Douglas School?*** [12] ***How many cans will you draw for Pierce School?*** [9]

Independent Practice

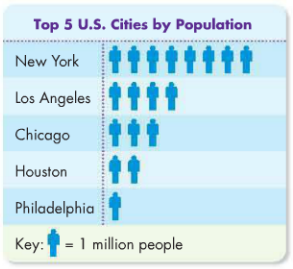
In **9** through **12**, answer the questions about the picture graph at the right.

9. How many people are represented by each picture?
1 million people

10. What is the difference in populations between the second most populated city and the least populated city?
3 million people

11. About how many people live in the two most populated cities?
About 12 million people

12. Can this data be presented in a bar graph? Explain.
See margin.



In **13** through **15**, use the partially completed picture graph at the right.

13. What amount does each symbol on the picture graph represent?
100 cans

14. How many cans did students at the Adams School collect?
1,000 cans

15. The students at the Douglas School collected 1,200 cans. The students at the Pierce School collected 900 cans. Copy and complete the graph to show these data.
15–16 Check students' work.

16. The table below shows the annual attendance in 1990 and 2000 at four national parks. Part of a double-bar graph for these data is shown at the right. Copy and complete the graph.

Data

National Park Visitors (millions)		
Park	1990	2000
Grand Canyon	3.8	4.5
Grand Teton	1.6	2.6
Olympic	2.8	3.3
Yellowstone	2.8	2.8

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Answer

12. Yes. The cities could be listed on the horizontal axis. The vertical axis could be labeled "Population in Millions of People" and numbered 1–10. Bars could be drawn to show the populations.