

Student Activity Book

Making Lemonade (SAB pp. 386–389)  
Questions 1–11

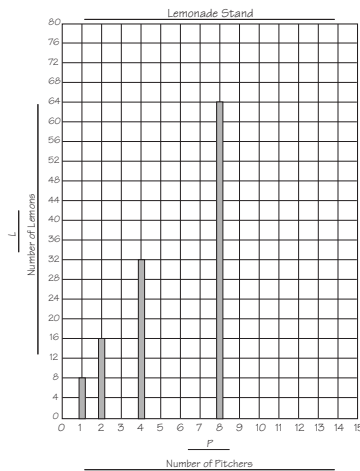
1. A.\*

Lemonade Stand

<i>P</i> Number of Pitchers	<i>L</i> Number of Lemons
1	8
2	16
4	32
8	64

B.\* Possible patterns: The number of pitchers doubles each time. The number of lemons also doubles each time. To find the number of lemons you can multiply the number of pitchers times 8.

2. A–C.\*



D.\* Possible patterns: The bars on the graph go up like a stair step. There are some spaces that do not have any bars drawn in. As you move to the right on the graph, each bar is twice as tall as the one before it.

Name \_\_\_\_\_ Date \_\_\_\_\_

**Making Lemonade**

Tara and Peter are not sure how many pitchers of lemonade to make. They chose to use a data table to help them decide how many lemons they will need to buy for different numbers of pitchers. Remember, they need juice from 8 lemons for each pitcher they make.

Lemonade Stand

<i>P</i> Number of Pitchers	<i>L</i> Number of Lemons
1	
2	
4	
8	

- A. Use the Homemade Lemonade recipe in the *Student Guide* to fill in the missing data.

B. Look at your data table. What patterns do you see?
- Use the data to make a bar graph on the Lemonade Stand graph.

A. Number the horizontal axis by ones to at least 12. Label this axis Number of Pitchers (*P*).

B. Number the vertical axis by fours to 80. Label this axis Number of Lemons (*L*).

C. Draw bars to show the data in your data table.

D. Look at your graph. What patterns do you see?

# Answer Key • Lesson 1: Lemonade Stand

Name \_\_\_\_\_ Date \_\_\_\_\_

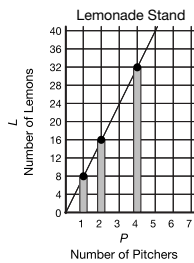
3. **A.\*** How many lemons do Tara and Peter need to make six pitchers of lemonade?
- B.\*** Show or tell how you decided.

## Making a Point Graph

A bar graph is a good way to make a picture of your data. Scientists and mathematicians also use point graphs to organize data and solve problems.

4. You can change your bar graph into a point graph. First make a dot at the top of each bar. Do the dots form a pattern? If so, describe it.
5. Use your ruler to draw a line through all the dots. Draw your line to the end of the graph in both directions.

This is part of Tara and Peter's graph. The beginning of your graph should look the same.



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3. **A.\*** They will need 48 lemons.
- B.\*** Possible strategy using the data table: I looked at my data table and saw that they would need 16 lemons for two pitchers and 32 lemons for four pitchers, so I added 16 and 32 to find how many lemons for 6 pitchers, 48.

Possible strategy using the graph: I noticed that the tops of the bars formed a straight line so I used my ruler to make a line and then I sketched in a bar to show 6 pitchers of lemonade. The bar stopped at 48 lemons.

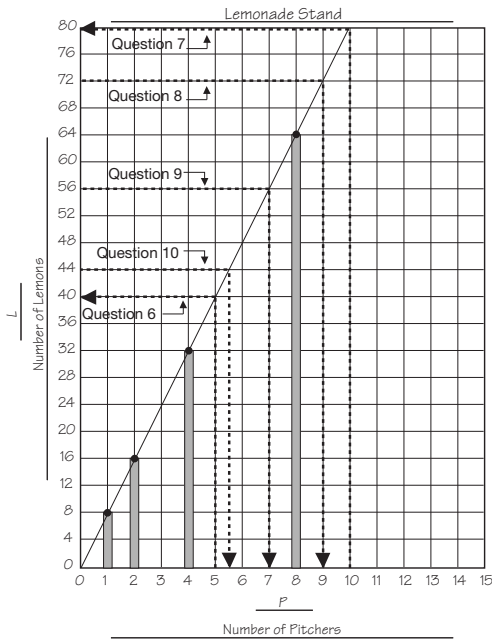
- 4.\* Possible response: Yes, the dots look like they lie on a straight line. See Figure 3 in the lesson.
- 5.\* See Figure 3 in the lesson.

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\*Answers and/or discussion are included in the lesson.

For Questions 6A, 7A, 8A, 9A and 10A, the graph in Figure 4 shows solutions using interpolation and extrapolation.



6. **A.\*** They will need 40 lemons.  
**B.** Possible response:  
 I added  $8 + 8 + 8 + 8 + 8 = 40$  lemons.
7. **A.\*** They will need 80 lemons.  
**B.** Possible response: I multiplied  
 $10 \times 8 = 80$  lemons.

Name \_\_\_\_\_ Date \_\_\_\_\_



Use your graph to solve Questions 6–10. Draw dashed lines on your graph to show how you found each answer. Then solve each problem another way to check your answer.

6. **A.** Use your graph to show how many lemons Tara and Peter will need to make five pitchers of lemonade.



- B.** Show or tell how you checked your answer using another strategy.

7. **A.** How many lemons do they need to make ten pitchers of lemonade?

- B.** Show or tell how you checked your answer using another strategy.

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8. **A.** How many pitchers of lemonade can they make with 72 lemons?  
**B.** Show or tell how you checked your answer using another strategy.

9. **A.** How many pitchers can they make with 56 lemons?  
**B.** Show or tell how you checked our answer using another strategy.

10. **A.** How many pitchers can they make with 44 lemons?  
**B.** Show or tell how you checked your answer using another strategy.

11. Tara and Peter went to the store to buy lemons. The lemons were on sale for 4 for \$1.00.

**A.** Write a number sentence to show how many lemons they can buy for \$9.00.

**B.** If they buy 2 dozen lemons how much will they spend? Show or tell how you know.









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8. **A.\*** They can make 9 pitchers of lemonade.  
**B.** I used my answer from Question 7. I know that you can make 10 pitchers with 80 lemons. Since  $80 - 8 = 72$  lemons, you can make 1 less pitcher of lemonade, or 9 pitchers.
9. **A.\*** They can make 7 pitchers of lemonade.  
**B.** Possible response: I know I will use 40 lemons to make 5 pitchers of lemonade and 16 lemons to make 2 pitchers of lemonade, since  $40 + 16 = 56$  lemons, you can make  $5 + 2 = 7$  pitchers of lemonade.
10. **A.\*** Possible response: They can make 5 pitchers of lemonade with four lemons leftover.  
**B.** Possible response: I drew a picture of 44 lemons and divided them into 5 groups of 8 lemons. I had four lemons left over.
11. **A.\***  $4 \text{ lemons per dollars} \times \$9.00 = 36 \text{ lemons}$   
**B.** \$6.00; Possible response: There are 24 lemons in 2 dozen. I know that you can buy 12 lemons for \$3.00. So, I doubled that to buy 24 lemons.

 = \$1.00	 = \$1.00
 = \$1.00	 = \$1.00
 = \$1.00	 = \$1.00

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\*Answers and/or discussion are included in the lesson.