Handout: Tasks from Curriculum Materials[1]

Name _____ Date _____

Student Sheet 8

How to Play Guess My Rule with Shapes

Materials: Deck of Guess My Rule cards

Two areas for grouping shapes according to whether or not they fit a rule—for example, a circle made of string or two different pieces of paper.

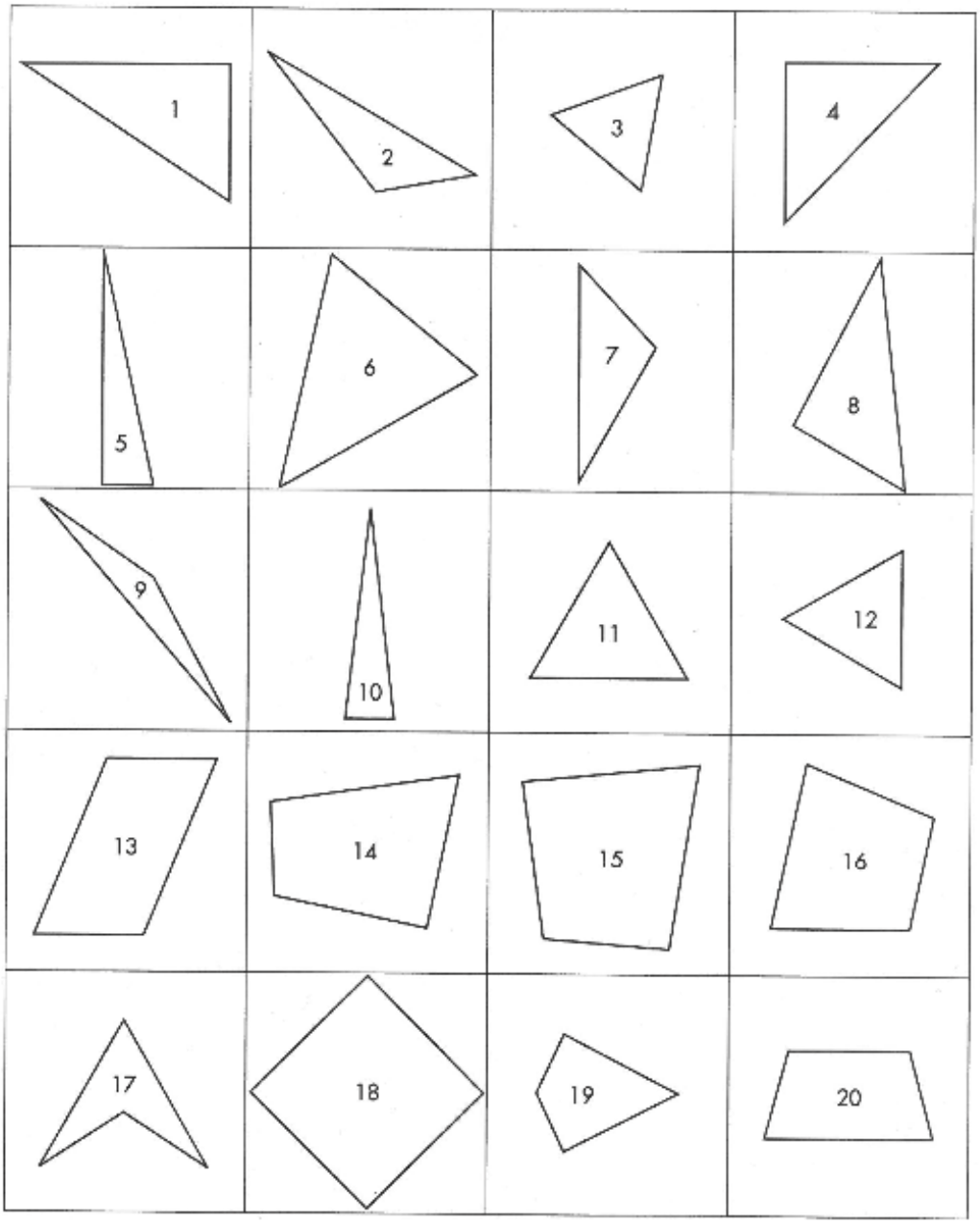
Players: 2

How to Play

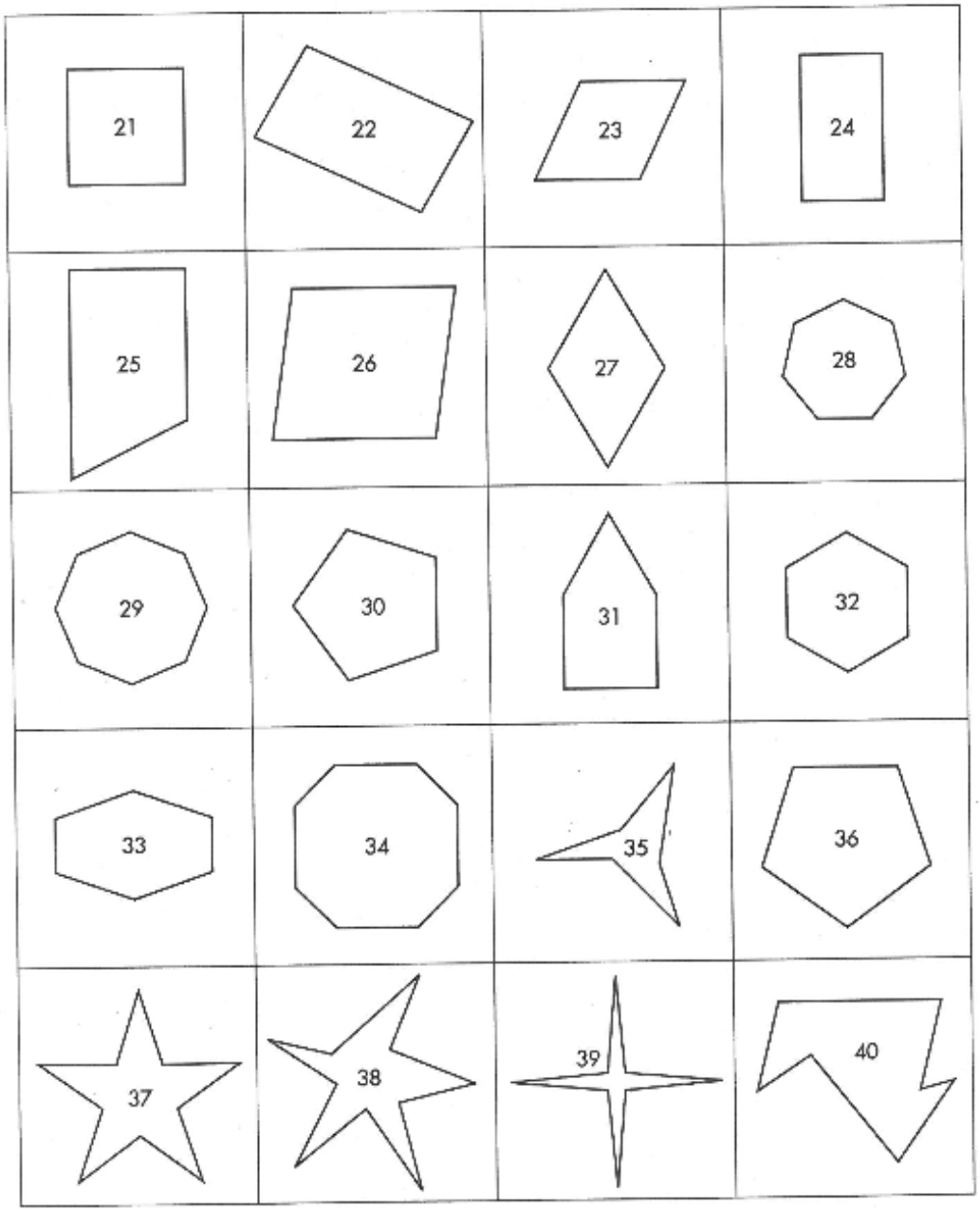
1. The first player chooses a rule and gives a few examples, putting those shapes that fit the rule in one place (e.g., inside the circle) and those shapes that do not in the other place (e.g., outside the circle). The rule should focus on properties of geometric shapes, such as the shapes in the circle being all right triangles, all triangles with at least one right angle, or all quadrilaterals that are not squares.
2. The second player tries to guess the rule by placing a shape either inside or outside the circle, depending on whether the player thinks it fits the rule or not.
3. The first player says whether or not the placement is correct.
4. The second player uses this information to eliminate possibilities, devise new solutions, and revise earlier guesses of what the rule might be. Using this new information, the second player again tries to guess where a particular shape belongs.
5. Repeat steps 3 and 4. The second player can guess a rule if the player thinks he or she has found a solution. The first player says whether or not the rule is correct.
6. Play continues until the second player guesses the rule or there are no shapes left to place.

[1] Excerpted from Clements, D., Tierney, C., Murray, M., Akers, J., Sarama, J. (2004). Guess my rule. In *Picturing Polygons: 2-D Geometry – Investigations in Number, Data, and Space, Grade 5.* (2nd ed.) (pp. 171, 182-183). Glenview, IL: Pearson Education, Inc.

GUESS MY RULE CARDS (page 1 of 2)



GUESS MY RULE CARDS (page 2 of 2)



Estimation Jar Activity[2]

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ACTIVITY 2·13

Estimation Jars

Objective To introduce the concept of estimation.

- [x] Whole Group
- [ ] Small Group
- [ ] Partners
- [ ] Center

Key Concepts and Skills
- Estimate the number of objects in a collection. [Number and Numeration Goal 2]
- Count objects in a collection. [Number and Numeration Goal 2]

Terms to Use estimate, about

Materials Home Link Master (*Math Masters*, p. 12); two identical clear containers; collections of small objects, such as counters or cubes

Planning Tip Place 10 identical objects in one container. Place 15 of the same type of object in the second container. There should be a clear distinction between the amounts in the containers; the objects in the second container should fill more of the container.

A Core Activities

Making an Estimate

Show children the container with 10 objects and ask them how many objects they think are inside. After getting responses, count the objects with children and label the container with the number. Show the second container to children and ask how many objects they think are in this container. Prompt them to give reasons for their answers. Discuss how it is sometimes hard to count objects—particularly when they are mixed together—and that it is important to be able to estimate, or determine *about* how many objects there are. Point out that sometimes you need an exact number, but sometimes an **estimate,** or a "smart guess," is enough.

NOTE Estimation is an important tool in mathematics. Many children worry that estimating is somehow wrong, but, in reality, it requires good number sense and is an important aid to understanding and solving problems.

Some teachers set up an "Estimation Station" in their classroom. They change the contents of the estimation jar at the beginning of each week and invite children to record estimates during the week. The class counts the contents of the jar on Friday.

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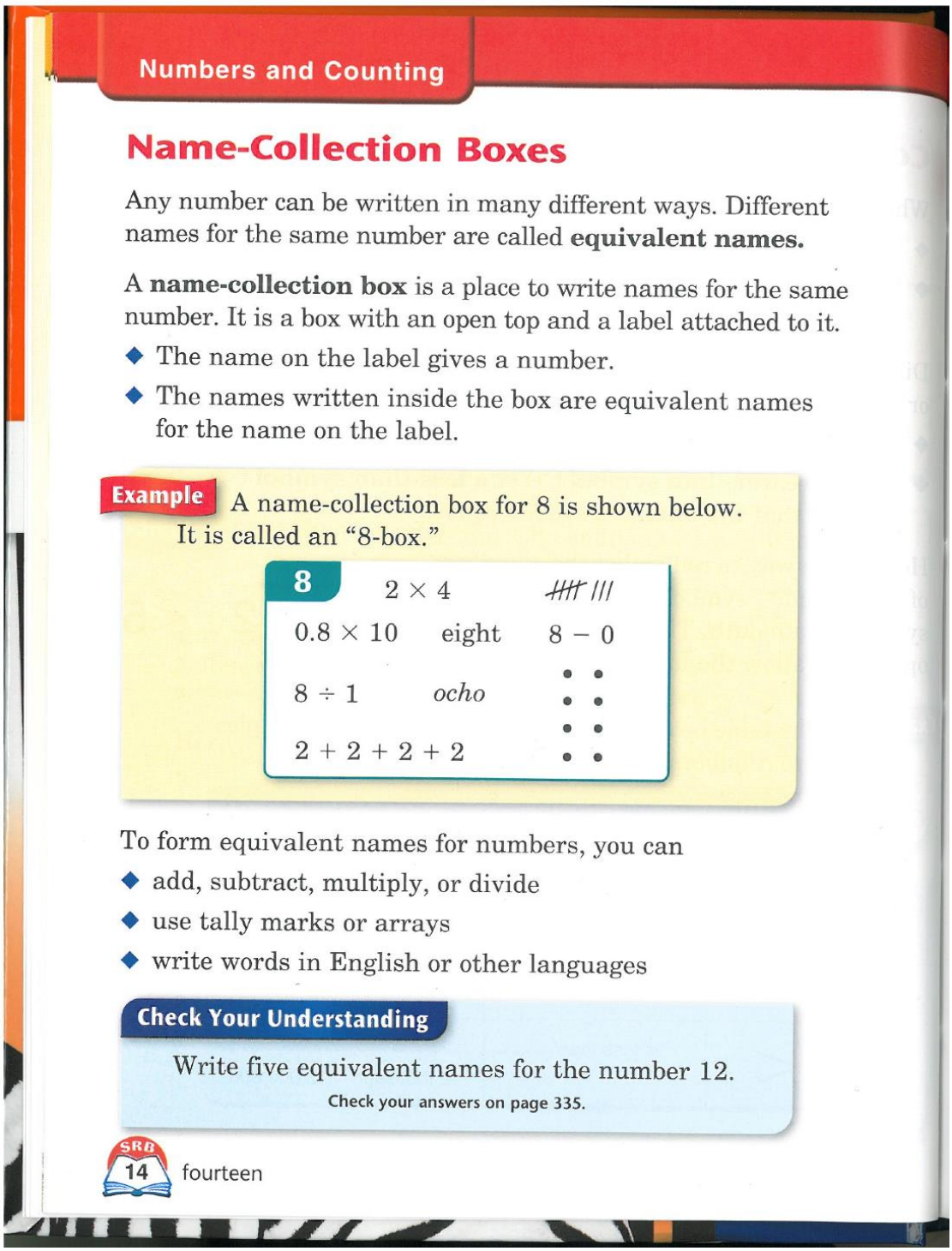
2 Excerpted from Bell, J., Bell, M., Beer, D.W., Freedman, D., Goodsell, N.G., Hanvey, N., et al. (2007). Estimation jars. In *Everyday Mathematics – Teacher's Guide to Activities, Grade K* (3rd ed.) (pp. 114-115). Chicago, IL: Wright Group/McGraw Hill.

Name-Collection Boxes Activity[3]



Numbers and Counting

Name-Collection Boxes

Any number can be written in many different ways. Different names for the same number are called **equivalent names.**

A **name-collection box** is a place to write names for the same number. It is a box with an open top and a label attached to it.

- The name on the label gives a number.
- The names written inside the box are equivalent names for the name on the label.

Example A name-collection box for 8 is shown below. It is called an "8-box."

8		
	2×4	𝍸 |||
0.8×10	eight	$8 - 0$
$8 \div 1$	*ocho*	⁘
$2 + 2 + 2 + 2$		

To form equivalent names for numbers, you can

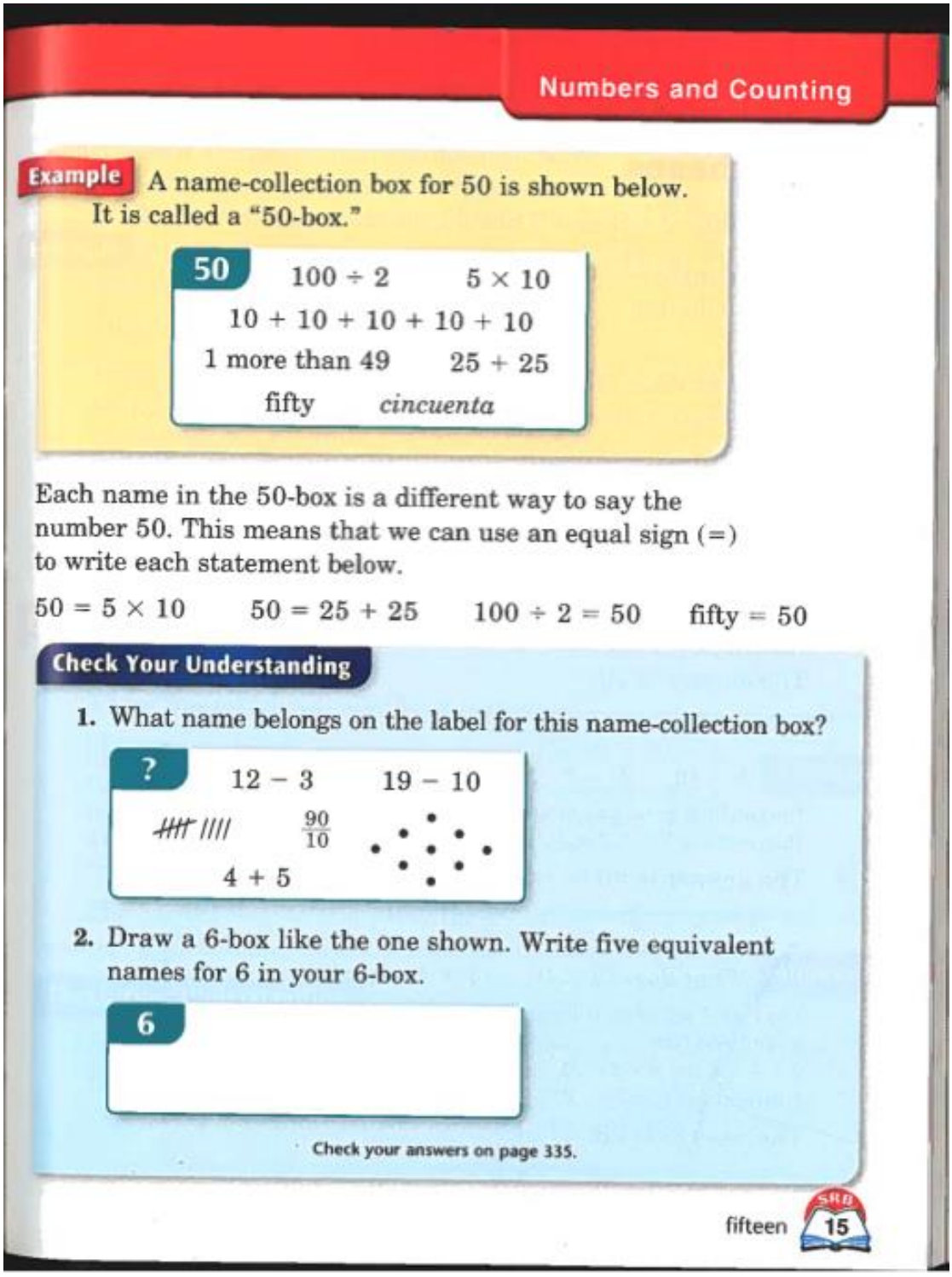
- add, subtract, multiply, or divide
- use tally marks or arrays
- write words in English or other languages

Check Your Understanding

Write five equivalent names for the number 12.

Check your answers on page 335.

[3] Excerpted from Bell, M., Bell, J., Bretzlauf, J., Dairyko, M.E., Dillard, A., Hartfield, et al. (2007). Name-collection boxes. In *Everyday Mathematics – Student Resource Book, Grade 3* (3rd ed.) (Vol. 1, pp. 14-15). Chicago, IL: Wright Group/McGraw Hill.



Example A name-collection box for 50 is shown below. It is called a "50-box."

50	
$100 \div 2$	5×10
$10 + 10 + 10 + 10 + 10$	
1 more than 49	$25 + 25$
fifty	*cincuenta*

Each name in the 50-box is a different way to say the number 50. This means that we can use an equal sign (=) to write each statement below.

$50 = 5 \times 10$ $50 = 25 + 25$ $100 \div 2 = 50$ fifty = 50

Check Your Understanding

1. What name belongs on the label for this name-collection box?

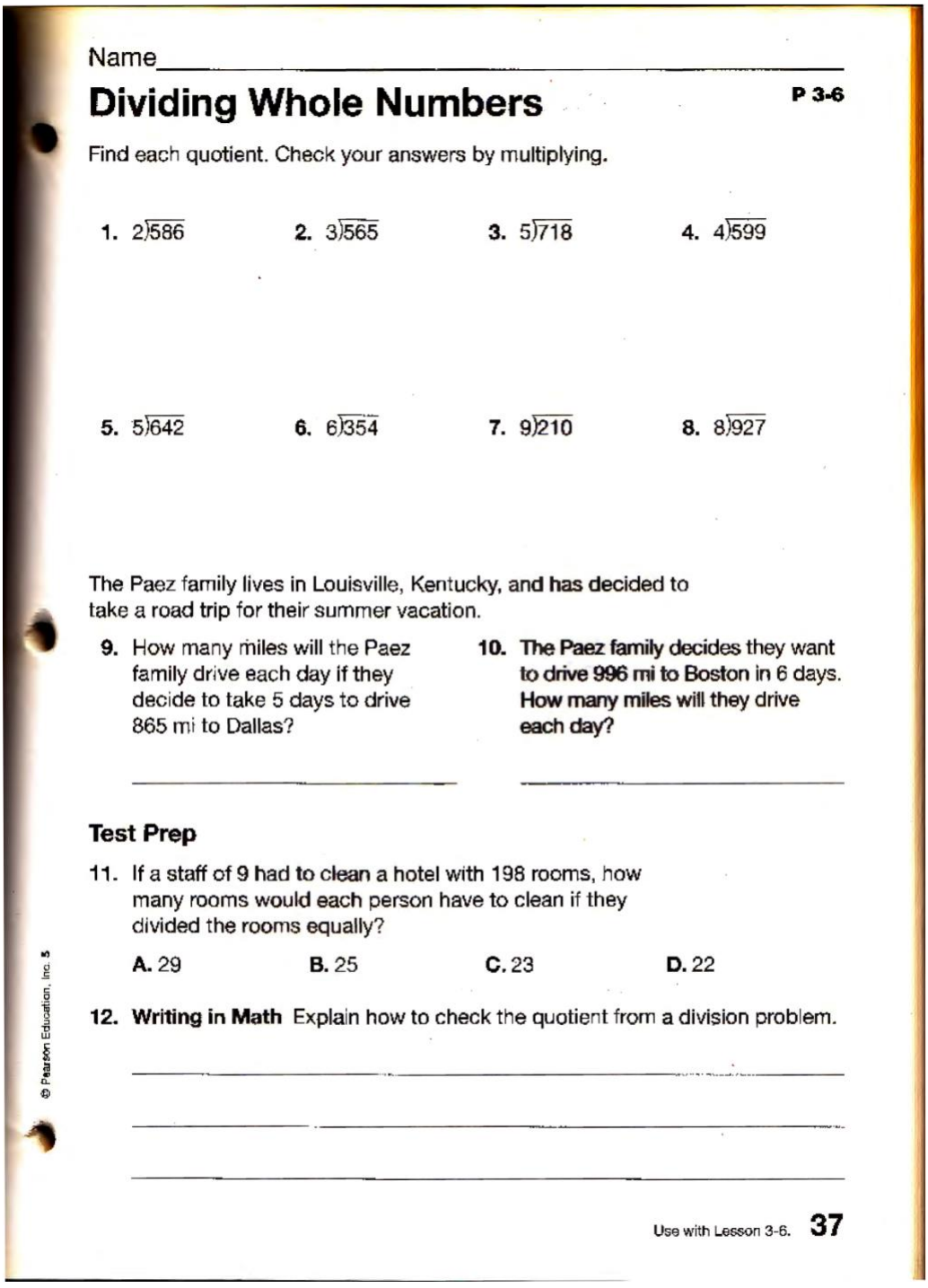
?	
$12 - 3$	$19 - 10$
𝍸 ||||	$\frac{90}{10}$
$4 + 5$	⁘

2. Draw a 6-box like the one shown. Write five equivalent names for 6 in your 6-box.

6

Check your answers on page 335.

Dividing Whole Numbers[4]



Name_____

Dividing Whole Numbers

P 3-6

Find each quotient. Check your answers by multiplying.

1. $2\overline{)586}$
2. $3\overline{)565}$
3. $5\overline{)718}$
4. $4\overline{)599}$
5. $5\overline{)642}$
6. $6\overline{)354}$
7. $9\overline{)210}$
8. $8\overline{)927}$

The Paez family lives in Louisville, Kentucky, and has decided to take a road trip for their summer vacation.

9. How many miles will the Paez family drive each day if they decide to take 5 days to drive 865 mi to Dallas?

10. The Paez family decides they want to drive 996 mi to Boston in 6 days. How many miles will they drive each day?

Test Prep

11. If a staff of 9 had to clean a hotel with 198 rooms, how many rooms would each person have to clean if they divided the rooms equally?

A. 29 B. 25 C. 23 D. 22

12. **Writing in Math** Explain how to check the quotient from a division problem.

Use with Lesson 3-6. 37

[4] Excerpted from Charles, R.I., Crown, W., Fennell, F., Caldwell, J.H., Cavanagh, M., Chancellor, D., et al. (2004). Dividing whole numbers. In *Scott Foresman Addison Wesley mathematics – Grade 5 Practice Masters/Workbook.* (p. 37). Glenview, IL: Pearson Education, Inc.