

Fair Share

Purpose

Students will represent any situation involving the sharing of objects or the number of groups of shared objects as division.

Materials

For the teacher: 10 small transparent portion cups, at least 20 beans, overhead projector, transparency of Black Line Master (BLM) *Recording Beans*

For each student: copy of BLM *Share Fair*

For each pair of students: 10 small portion cups, at least 20 beans, copy of BLM *Recording Beans*, pencil

Activity

A. Introduction

1. Show students 20 beans on the overhead. Tell them you have five cups and that each cup needs to have the same amount of beans to have a fair share.
2. Ask a student to come to the overhead and put one bean at a time into each of the five cups until the beans are gone.
3. Ask: "How many beans are in each cup? [4] Can you write a number sentence to tell what we just did?" [$20 \div 5 = 4$]
4. Do another example using 15 beans and three cups. [$15 \div 3 = 5$]
5. Tell students you have 24 beans. You want to give four beans each to as many cups as possible. Show on the overhead taking four beans from the pile and putting them into a cup. Repeat until the 24 beans are used up. Ask: "To how many cups was I able to give four beans? [6] Can you write a number sentence to tell what we just did? [$24 \div 4 = 6$]"
6. Repeat with 14 beans, grouping two beans each time. [$14 \div 2 = 7$]
7. Stress to students that division is the mathematical process used when the situation involves the sharing of objects or the number of groups of shared objects.

B. Partner Activity

1. Hand out beans, cups, and copies of the BLM *Recording Beans* to each pair of students.
2. Allow partners to complete the activity.

(continued)

connecting
across the
curriculum



English/ Language Arts

Read *The Doorbell Rang* by Pat Hutchins. Have students write stories about a time when they were called upon to share something equally.

INCORPORATING
TECHNOLOGY



Have students solve similar problems with larger numbers using a calculator to find the answer.

Standards Links
4.2.6, 4.2.7, 4.3.7

Activity (continued)


C. Homework


Have students complete the BLM *Share Fair* as homework.

Questions for Review

Basic Concepts and Processes

During the activity, discuss the following questions with students to gauge their understanding of the indicator:

 What are you finding here: the number of cups or the number of beans per cup?

 Tell me how you know that.

Names: _____

Recording Beans

Beans	Cups	Beans Per Cup	Division Sentence
1. 12	4		
2. 12		6	
3. 12		3	
4. 12	2		
5. 20	5		
6. 20	2		
7. 20		5	
8. 20	10		
9. 16	8		
10. 16	4		
11. 16		8	
12. 18		9	
13. 18	3		

Recording Beans

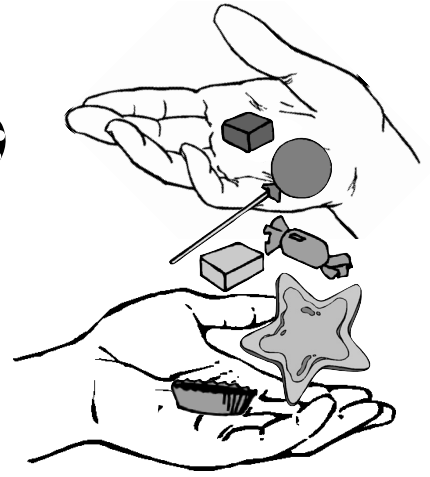
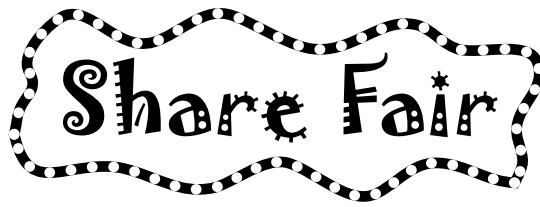
Teacher Directions

Have students use this BLM during the partner activity to record their answers.

Answer Key

- (1) 3, $12 \div 4 = 3$
- (2) 2, $12 \div 6 = 2$
- (3) 4, $12 \div 4 = 3$
- (4) 6, $12 \div 2 = 6$
- (5) 4, $20 \div 5 = 4$
- (6) 10, $20 \div 2 = 10$
- (7) 4, $20 \div 4 = 5$
- (8) 2, $20 \div 10 = 2$
- (9) 2, $16 \div 8 = 2$
- (10) 4, $16 \div 4 = 4$
- (11) 2, $16 \div 2 = 8$
- (12) 2, $18 \div 2 = 9$
- (13) 6, $18 \div 3 = 6$

Name: _____



**Read each problem carefully.
Write the number sentence.
Solve the problem.**

1. Sally and four friends brought a box of cereal to the park for a snack. If the box had forty-five pieces of cereal in it, and the girls share fairly, how many pieces will each girl get to eat?

2. Grandma bought a bag of forty-eight pieces of candy for her grandchildren. She was able to give each of her grandchildren six pieces of candy. How many grandchildren does she have?

3. Bob bought fifteen pieces of bubblegum before baseball practice. If he shares them fairly with Tom and Marcus, how many will each boy have?

4. Jill and her friends bought a bag with thirty-six cookies in it. They shared fairly and each girl had six cookies. How many friends did Jill have?

Share Fair

Teacher Directions

Have students complete this BLM for homework.

Answer Key

- (1) $45 \div 5 = 9$ pieces of cereal
- (2) $48 \div 6 = 8$ grandchildren
- (3) $15 \div 3 = 5$ pieces of bubblegum
- (4) 5 friends $36 \div 6 = 6$ (Jill + 5 friends)