

## Subtraction for Sevens

### Purpose

Students will solve problems, choosing strategies and tools, explaining their reasoning, making calculations, and checking results.

### Materials

*For the students:* cubes or other counting objects, paper, pencils

### Activity

#### A. Introducing the Problem

1. Give each student 20 of the cubes (or other objects).
2. Ask students in different parts of the room to count out 10, 12, 15, or 18 cubes.
3. Ask them how many cubes they need to take away to leave seven cubes.
4. Call on several students to tell what numbers they have.
5. Draw attention to the fact that their two numbers subtract to give seven.

#### B. Solving the Original Problem

1. Divide the class into groups of three or four students, and ask each group to use its cubes to find as many different ways of subtracting to leave seven that it can.
2. Ask each student group to record its results on paper.
3. As groups produce answers, ask them to look for patterns in their answers.

#### C. Solving Related Problems

1. As groups finish Part B, ask them to find as many different ways of subtracting to give 2 (or 5, 9, 11, etc.) that they can.
2. Again ask each student group to record its results.
3. As groups produce answers, ask them to look for patterns in their answers.

(continued)



#### INCORPORATING TECHNOLOGY

Have students use a computer program to solve subtraction word problems.



#### MEETING INDIVIDUAL NEEDS

Some students may have difficulty completing this activity. Provide these students with some subtraction problems they can solve using their objects. Leave some of the numbers out of the equations so the students must use problem solving skills to determine what number completes the problem.

Standards Links  
1.2.2, 1.2.4, 1.2.5, 1.3.4

## Activity (continued)

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### D. Discussion

1. With the whole class, discuss the ways of subtracting to give seven and any patterns that students found.
2. Discuss ways of making other numbers and have students look for patterns.

## Questions for Review

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### Basic Concepts and Processes

During the activity, discuss the following questions with your students to gauge their understanding of the Standard Indicators:



How many cubes do you have?



How many cubes will you have if you subtract/take away [insert number] cubes?



How many ways did you find to make 7 using subtraction?



How do you know if you found all of them?

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