

# Making Addition Easy

## Purpose

Students will discover the commutative and associative rules of addition and their use to simplify calculations.

## Materials

*For the teacher:* chalk, chalkboard

## Activity

### A. Introduction

1. Write the numbers “16,” “8,” and “4” on the chalkboard.
2. Divide the class into three groups. (It is not necessary to physically move the students. Simply indicate the dividing line between rows of desks.)
3. Write the following addition sentences on the board and assign each group to solve one of the addition sentences:

$$16 + 8 + 4 = \underline{\quad}$$

$$16 + 4 + 8 = \underline{\quad}$$

$$8 + 4 + 16 = \underline{\quad}$$

### B. Discussion

1. Ask each group for the answer to their addition sentences.
2. Ask a member of each group to explain how he/she arrived at an answer.
3. Discuss any discrepancies and, as a class, add each of the number sentences to arrive at a correct answer.
4. Ask the class which sentence sounded easiest to solve.
5. Discuss the following questions:
  - Is it okay to add the numbers in a different order? (Adding numbers in a different order demonstrates the commutative rule.)
  - Did everyone group the addition sentence into two separate problems (e.g.,  $(16 + 4) + 8$ )?

*(continued)*

EXTENDING  
THE



**ACTIVITY**

Repeat the activity with subtraction to teach that the commutative and associative rules apply to addition but not to subtraction.

MEETING  
INDIVIDUAL



**NEEDS**

Help students who have difficulty by assisting them in choosing the order that would simplify the addition of the three numbers. Allow them to compare applying the associative rule with using a manipulative or tally marks to find the total.

**Standards Links**  
**2.1.12, 2.2.2, 2.6.4**

**Activity (continued)** 

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- Does grouping into two separate problems result in the same answer as the alternative? Demonstrate the alternative (using manipulatives or tally marks) and compare answers. (The grouping into two problems demonstrates the associative rule.)

**C. Student Activity**


1. Repeat the activity above with a new set of numbers.
2. Allow students to add the numbers in the order they choose.
3. Discuss the procedure when students are finished.
4. Repeat this portion of the activity one or two more times, gradually increasing the size of the numbers used.


**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 Indicator:

 Did you get the correct answer to the addition sentence?

 What order did you use to add the numbers?

 Did that simplify the addition?

 Did you divide the number sentence into two problems?

 How did you find the correct answer to each of the two problems?