

Skills

Students will:

use reasoning abilities to perceive number patterns

identify relationships among numbers

test and justify reasonability of conclusions

Purpose

Number sense—the sense of how numbers are related to each other and how they work—is the foundation of all mathematical knowledge. Students need a solid knowledge and flexible curiosity about how numbers work to make sense of the computational methods they learn and to be able to apply those computation skills to problem-solving situations.

How to Use the Organizer

To introduce the organizer, draw a large soup pot and flames on the chalkboard. Tell students, “I’m going to make a number soup, but only certain ingredients go into my soup. Can you suggest some ingredients?” Think of a “rule,” such as a number or number relationship. Write a few numbers or expressions that fit the rule inside the pot, and a few numbers that do not fit the rule in the flames. For example, for the rule “divisible by five,” you might write 5, 25, 125 in the pot and 2, 24, 99 in the flames. Tell students that you have a rule in mind, and that any numbers or expressions that fit that rule can go into the pot. As students suggest numbers or expressions, write them either in the pot (if they fit the rule) or in the flames (if they don’t). After each suggestion, pause and ask, “Do you know what the rule is for this number soup?”

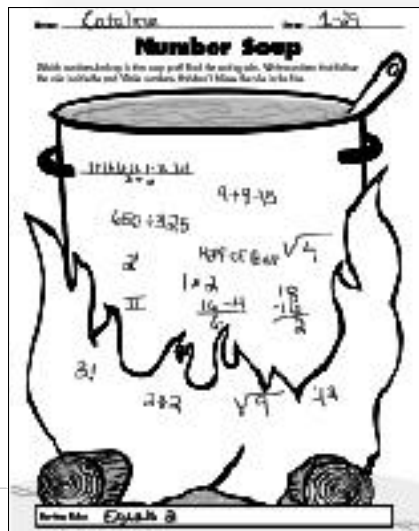
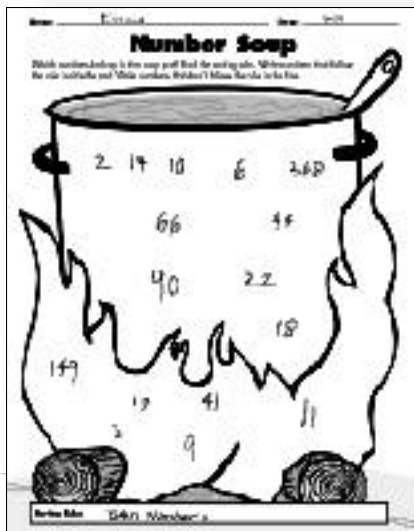
Examples

Primary Grades

After using manipulatives to explore odd and even numbers, cooperative groups of first graders played the game “Odd or Even.” They took turns picking random numbers out of a hat and recording the numbers in the proper place on the graphic organizer—even numbers inside the soup pot, and odd numbers in the fire.

Intermediate Grades

Sixth graders used the Number Soup organizer to record equivalent expressions for a variety of numbers. Each student chose a different number and wrote ten equivalent expressions or “names” for the number in the soup pot. Expressions included the results of operations, exponential expressions, arrays, and drawings.



Name: _____

Date: _____

Number Soup

Which numbers belong in the soup pot? Find the sorting rule. Write numbers that follow the rule inside the pot. Write numbers that don't follow the rule in the fire.



Sorting Rule: _____