

Objective

Explore the Commutative Property of Addition.

Skills

- Counting
- Adding
- Understanding number systems

NCTM Expectations

Algebra

- Illustrate general principles and properties of operations, such as commutativity, using specific numbers.
- Model situations that involve the addition and subtraction of whole numbers, using objects, pictures, and symbols.

Algebra

Commutative Property

Children's number sense develops as they understand the size of numbers, develop different ways of representing numbers, and use numbers with operations. Exploring the Commutative Property of Addition—whereby students learn that $1 + 2 = 3$ means the same thing as $2 + 1 = 3$ —helps develop children's understanding of the operation of addition.

Try It! Perform the Try It! activity on the next page.

Talk About It

Discuss the Try It! activity.

- **Ask:** What do you notice about the numbers you added in each number sentence? How are they different? How are they the same?
- **Ask:** What do you notice about the sum in each number sentence?
- **Ask:** How can you show that when you add, you can switch the order of the numbers you are adding and still get the same sum? Have students break apart their Snap Cube® trains and model switching the order of the numbers they added.

Solve It

With children, reread the problem. Invite children to draw pictures of red and yellow stars to model Janie and Tyrone's addition sentences. Have children write two or three sentences to explain why Janie and Tyrone were both right.

More Ideas

For other ways to teach about the commutative property of addition—

- Write several addition sentences on the board. Tell children that in your addition sentences, the first number is always red and the second is always yellow. Have children use Two-Color Counters to model each one, then flip all the counters over and write the new addition sentence represented by them.
- Have children make a row of 4 red and 6 blue Color Tiles. Then ask children to make another row beneath it of 6 red tiles and 4 blue tiles. Tell children to count the tiles in each row and compare their lengths to show that $4 + 6 = 10$ and $6 + 4 = 10$. Invite children to use the tiles to model more examples of the Commutative Property of Addition.

Standardized Practice

Have children try the following problem.

$3 + 1 = 4$ shows the picture below. What is another number sentence that matches the picture below? Circle the answer.



- A. $2 + 2 = 4$ B. $4 + 1 = 5$ C. $1 + 3 = 4$