

True-False Statements

3rd Grade

Before beginning the routine, inform students to show you a sign on their chest if they believe the statement is **TRUE** or **FALSE** so you can see ahead of time what they are thinking before sharing. (An example of a sign could be thumbs up for true or thumbs down for false.)

$2 \times 5 = 5 + 5$ “Show me if you think this statement is True or False.” Wait until you get all responses. “How do you know? Discuss with your partner.” Have students share their thinking. Record any student thinking.	Repeated Addition “2 groups of 5 is the same as 5 add 5 more”
$2 + 2 + 2 + 2 + 2 = 2 \times 5$ “Show me if you think this statement is True or False.” Wait until you get all responses. “How do you know? Discuss with your partner.” Have students share their thinking. Record any student thinking.	Commutative Property “5 groups of 2 is the same as 2 groups of 5”
$3 \times 5 \times 2 = 10 \times 3$ “Show me if you think this statement is True or False.” Wait until you get all responses. “How do you know? Discuss with	Associative Property

your partner." Have students share their thinking. Record any student thinking. **Students may multiply across $3 \times 5 = 15$ and then $15 \times 2 = 30$. Teacher records it: $(3 \times 5) \times 2 = 10 \times 3$ Teacher discusses parenthesis and how mathematicians use the parenthesis to group numbers together. "Is there another way to group the numbers in the equation (point to $3 \times 5 \times 2$) and get the same product as 10×3? Discuss this with your partner. $3 \times (5 \times 2) = 10 \times 3$ How would we rewrite this equation using the product of 5×2? Turn and talk to your partner. $3 \times 10 = 10 \times 3$ Is this true? Tell your partner why or why not.	"15 groups of 2 is the same as 10 groups of 3" Commutative Property
$2 \times 12 = 2 \times 6 \times 6$ "Show me if you think this statement is True or False." Wait until you get all responses. "How do you know? Discuss with your partner." Have students share their thinking.	Associative Property

Record any student thinking.

“Why would someone think it’s true?”

“How can we make it true? Turn and talk to your partner.”

**Sample answers:

$$2 \times 12 = 2 \times 6 \times 2$$

Have students discuss how they would group the numbers and if it would work if they grouped the numbers another way.