

Learning Activity for Multiplication Association 4th Grade

Objective: The students will be able to identify mathematical properties; associative, identity, distributive, commutative

Materials: Index cards with different expressions illustrating each of the properties

MULTIPLICATION ASSOCIATION

Chorus:

Multiplication Association
Moving the parentheses around and around
Moving the parentheses around

When you multiply three numbers
You've got a couple ways to go
When you multiply three numbers
You line 'em all up in a row

Then you put two numbers in parentheses
And when they are multiplied,
You multiply their product
By the number outside

Chorus:

Multiplication Association
Moving the parentheses around and around
Moving the parentheses
Like a little fence, you see?
Moving the parentheses around.

When you multiply three numbers
A couple things that you can do
You can group the first two together
Or put a fence around the second two

The parentheses can go on the left or right
Allow me to reiterate
That no matter how those numbers
Associate
The product is the same

Chorus:

Multiplication Association
Moving the parentheses around and around
Moving the parentheses
Like a little fence, you see?
Moving the parentheses around.

Spoken: So the Associate Property says that if you're multiplying 2 times 3 times 4, you can put the 2 and the 3 in parentheses and multiply them together to get ...

Kids chorus: 6!

Spoken: Right! 6! Then you multiply 6 by the number outside the parentheses which was 4 to get ...

Kids chorus: 24!

Spoken: Right! Or you could have chosen to put the parentheses around the 3 and the 4 and take their product first which is ...

Kids chorus: 12!

Spoken: Right, 12. Then you multiply 12 by the number that was outside the parentheses, 2, to get ...

Kids chorus: 24!

Spoken: Right ...

(sings)
Moving the parentheses around and around,
Moving the parentheses around

Spoken: Now you want to hear about the Commutative Property?

Kids chorus: Not really!

Spoken: The Commutative Property says that when you multiply, you can move the numbers around, too. So 2 times 3 is the same as 3 times 2. With the Commutative Property, you can imagine the numbers to be Commuters on a bus or train -- they can move around, but their destination's the same!

(sings)
You can move the numbers all around, all around,
You can move the numbers all around.

Kids chorus: Go back to the Associative Property!

Spoken: Okay ...

Multiplication Association
Moving the parentheses around and around
Moving the parentheses
Like a little fence, you see?
Moving the parentheses around.

Procedure:

- 1) Play the song.
- 2) Teacher led discussion about the properties with examples from the song.

- 3) Students will each receive an expression that represents one of the properties. Students will find the other students that have the same property and form a group in each corner of the room.
- 4) Students will write their own rule(s) for their property and share with the class. Repeat with different expressions.

Evaluation: Teacher observation while playing the game to show a basic understanding of the basic properties. Game rules: Each player will have 24 property cards and a game board with examples of each property. Each player draws a card and reads the property shown. Each player places the property card on the corresponding equation on their game board. Continue this process until 1 player gets 4-in-a-row.