

## The Commutative Property of Multiplication

Caleb is helping his teacher count the tickets the class will need to ride the rides at Adventure Land. Each ride needs one ticket. Can you help Caleb multiply to count the tickets the class will need for each ride?

You will use the commutative property to find the total number of tickets for each ride. If Caleb knows the answer to a multiplication sentence, you can use that product to find the answer to a multiplication sentence with the same factors in different places! Then, you will create an array to check your work. Are you ready to help Caleb count the tickets using the commutative property?

Caleb wants to know how many tickets the class will need for the students who want to go on the Ferris wheel. He says there are 5 groups of students who want to go on the Ferris wheel. There are 7 students in each group. How many students want to ride the Ferris wheel? Caleb says he knows that 7 times 5 equals 35. Can you use the product that Caleb found?

Yes! These two multiplication sentences have 5 and 7 as factors, but their places are switched! By the commutative property, 5 times 7 equals 35!

Can you help Caleb check this answer by making an array? Tell him how many rows and columns you need, and he will create the array for you! How many rows and columns do you need to make the array for 5 times 7?

5 rows and 7 columns! That's a 5-by-7 array! Now count the shapes to see the correct product.

Did you count 35 circles? Yes! That means 5 times 7 equals 35. You and Caleb were correct! 35 students want to ride the Ferris wheel. The class needs 35 tickets for the Ferris wheel!

Caleb wants to know how many tickets the class will need for the students who want to go on the boat ride. He says there are 8 groups of students who want to go on the boat ride. There are 6 students in each group. How many students want to ride the boat ride? Caleb says he knows that 6 times 8 equals 48. Can you use the product that Caleb found?

Yes! By the commutative property, 8 times 6 equals 48!

Now Caleb needs your help to check this answer with an array. How many rows and columns do you need to make the array for 8 times 6?

8 rows and 6 columns! That's an 8-by-6 array! Now count the shapes to see the correct product.

Did you count 48 stars? Yes! That means 8 times 6 equals 48. You and Caleb were correct! 48 students want to ride the boat ride. The class needs 48 tickets for the boat ride!

You did a great job using the commutative property and arrays to help Caleb count the tickets the class needs. The students can't wait to ride the rides at Adventure Land!

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