

Commutative Cookies (Grade range 3 – 4)

Common Core Standard: 3.OA- Apply properties of operations as strategies to multiply.

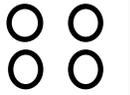
The Commutative Property of Multiplication: When two numbers are multiplied together, the product is the same regardless of the order of the multiplicands. **For example: $4 \times 2 = 2 \times 4$ $8 = 8$**

Materials used for this game: Commutative Cookies available through RAFT at www.raftstore.net



Example: If two people play the game, **the first person rolls a 4 and the second person rolls a 2**, here is what the batches of cookies will look like on the two worksheets:

First batch of cookies = Second batch of cookies

cookies	beads (chips)	drawing	equation
4	2		$4 \times 2 = 8$

cookies	beads (chips)	drawing	equation
2	4		$2 \times 4 = 8$

- 1) Roll the dice and the person with the highest number goes first.
- 2) The first player rolls the dice to a specific number. That number will be used to determine for the number of cookies in the first batch.
- 3) The second player rolls the dice to a specific number. That number will be used to determine the number of beads (chips) to use on each cookie in Batch 1.
- 4) The first player will record the number of cookies and chips used in first batch of cookies worksheet.
- 5) The second player will repeat the activity by reversing the number of cookies and beads used in the first batch of cookies and complete the second batch of cookies worksheet.

Congratulations! You just used a math property that helps you learn Algebra!