What Are Commutative and Associative Properties?

Commutative Property:

- The **commutative property** allows us to change the order of the numbers without changing the outcome of the problem.

- The order of the numbers (**addends**) does not affect the sum. Therefore, 6 + 10 = 10 + 6.The words **commuter** and **commutative** come from the same root word, "commute," which means "**to exchange for another**."

Associative Property:

- The **associative property** allows us to change the grouping of the numbers.

- The **ass** 3 or more addend um is added to the t olved by adding which equals 25. Th different set of pairs

Other e

$$14 + (5 + 24) = (14 + 5) + 24 = 43$$

$$(20 + 30) + 9 = 20 + (30 + 9) = 59$$

$$(3 \times 6) \times 20 = 3 \times (6 \times 20) = 360$$

$$15 \times (8 \times 1) = (15 \times 8) \times 1 = 120$$

- The associative property allows us to choose the first two numbers to add or multiply. Sometimes, the first two numbers added equal a sum of 10 or 20 or 100. This makes it easier to add the third number. Sometimes, the sum or product is known quickly and so speeds the process of adding or multiplying more than two numbers.

- Neither the commutative property nor the associative property can be applied to subtraction or division. **These two properties apply only to multiplication and addition.**

How to figure out Commutative Property and Associative Property problems:

- When adding or multiplying, the order of the numbers is irrelevant. The same sum or product will be the result, regardless of the order of the numbers:

145 + 240 = 240 + 145 = 385

Try This!

- Write a

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- Write another way to calculate and solve: **68 X 35**

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- Apply the associate law and solve: **5 + 12 + 28**

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- Apply the distributive law and solve: **12 + 50 + 23**

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- Apply the distributive law and solve: **40 + 25 + 9**

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