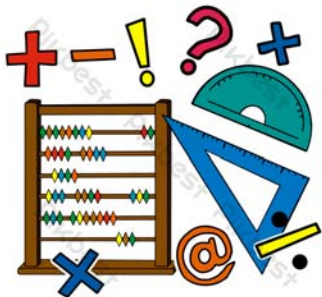


Name _____

Unraveling the Mystery of the Order of Operations



Understanding the order of operations in arithmetic is like having a secret code to unlock the mysteries of mathematical expressions. Without it, solving equations would be like navigating a maze blindfolded. Let's delve into this essential concept and shed light on the rules that govern the sequence of operations in mathematics.

Imagine you're faced with a mathematical expression, such as $6 + 3 \times 2$. At first glance, it may seem straightforward, but without following the correct order of operations, you might end up with an incorrect answer. This is where the acronym PEMDAS comes into play, serving as a guide to ensure accuracy in calculations.

PEMDAS stands for Parentheses, Exponents, Multiplication and Division (from left to right), and Addition and Subtraction (from left to right). These rules dictate the sequence in which mathematical operations should be performed to obtain the correct result.

First and foremost, parentheses take precedence. Any operations enclosed within parentheses must be carried out first. For example, in the expression $(6 + 3) \times 2$, the addition within the parentheses is performed before multiplying by 2.

Next, exponents are evaluated. An exponent tells us how many times a number should be multiplied by itself. For instance, in the expression 2^3 , 2 is raised to the power of 3, resulting in 8.

After parentheses and exponents, multiplication and division are tackled. These operations are performed from left to right, regardless of which comes first. For example, in the expression $6 \div 2 \times 3$, both division and multiplication are performed in order from left to right, resulting in 9.

Finally, addition and subtraction are executed in the same manner, from left to right. For instance, in the expression $6 + 3 - 2$, both addition and subtraction are performed in order, resulting in 7.

By following the order of operations diligently, we can ensure consistency and accuracy in our mathematical calculations. Whether solving simple equations or complex problems, adhering to these rules is essential for obtaining the correct answer.

In conclusion, the order of operations is a fundamental concept in arithmetic that governs the sequence of mathematical operations. By following the acronym PEMDAS—Parentheses, Exponents, Multiplication and Division, Addition and Subtraction—we can navigate through mathematical expressions with confidence and precision.

