



# Math Study Strategies

## Math for Automotives

### Order of Operations



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Approx opening time  
2 min at 56K

Remember to use the Order of Operations when you do calculations.

**Think PEMDAS-or “Please excuse my dear Aunt Sally” - to use the Order of Operations:**

**P** stands for **Parenthesis**. Do operations in parenthesis first.

**E** stands for **Exponents**. Do all of these after any parenthesis.

**M** stands for **Multiplication**.

**D** stands for **Division**.

**A** stands for **Addition**.

**S** stands for **Subtraction**.

When solving problems involving the order of operations, remember the following:

1. The **parenthesis** ( ) tell which operation to do the first. After working inside the parenthesis, you must do multiplication and division before addition and subtraction.
2. The **braces** { } show the next numbers to work with. Inside the braces, multiply and divide before you add and subtract.
3. The **brackets** [ ] show the third group of numbers to work with. Again, multiply and divide, then add and subtract.

After working in the parenthesis, braces, and brackets, do the remaining multiplication and division before addition and subtraction, from left to right.

There are two **exceptions**:

***If the expression starts with division and then multiplication, and there is no addition or subtraction sign between the multiplication and division, perform division first and multiplication second.***

$$27 \div 3 \times 2 = 9 \times 2 = 18$$

***If the expression starts with subtraction and then addition, and there is no multiplication or division sign between the addition and subtraction, perform subtraction first and addition second.***

$$8 - 5 + 2 = 3 + 2 = 5$$

