# Order of Operations

<table>
<thead>
<tr>
<th>What is a numerical expression?</th>
<th>includes only numbers and operation symbols</th>
</tr>
</thead>
<tbody>
<tr>
<td>What does it mean to simplify?</td>
<td>to find an equivalent expression that is simpler than the original</td>
</tr>
</tbody>
</table>
| What is the order of operations? | Order of operations is a series of steps to solve numerical expressions.  
1. Perform operations in parentheses  
2. Find the values of the numbers with exponents  
3. Multiply or divide from left to right as ordered in the problem  
4. Add or subtract from left to right, as ordered in the problem |
| PEMDAS  
Please  
Excuse  
My  
Dear  
Aunt  
Sailie | Parentheses  
Exponents  
Multiply  
Divide  
Add  
Subtract |
| \( \frac{9 + 12 \times 2}{9 + 24} \) | 33 |
| \( 4 \times 3^2 + 8 - 16 \) | \( 4 \times 9 + 8 - 16 \)  
\( 36 + 8 - 16 \) | 28 |
| \( \frac{5 + 12 \div 6 - 3}{5 + 2 - 3} \) | \( 7 - 3 \) | 4 |