

Solving with Order

Let's read to learn how the order of operations helps us solve math problems step by step.

Pay Attention To:

- What the order of operations is
- What steps are followed in the order of operations
- How parentheses affect the steps
- A math example that uses the order of operations

order of operations

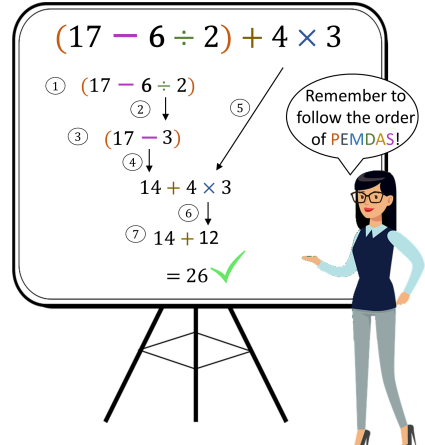
order of operations

P
parentheses
grouping symbols
 $() \{ \} []$

E
exponents
 x^2

MD
multiply and divide
 $\times \div$
whichever comes first
left → right

AS
add and subtract
 $+ -$
whichever comes first
left → right



Remember to follow the order of PEMDAS!

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In math, we follow a rule called the **order of operations**. This rule tells us which steps to do first, next, and last.

Look at this example: $5 + 3 \times 2$. We solve 3×2 first. That gives us 6. Then we do $5 + 6$. The answer is 11. We follow the **order of operations** to do this.

Sometimes, we use **parentheses** to show where to start. In $(5 + 3) \times 2$, we add first because of the **parentheses**. Then we multiply. The **parentheses** tell us what part comes first.

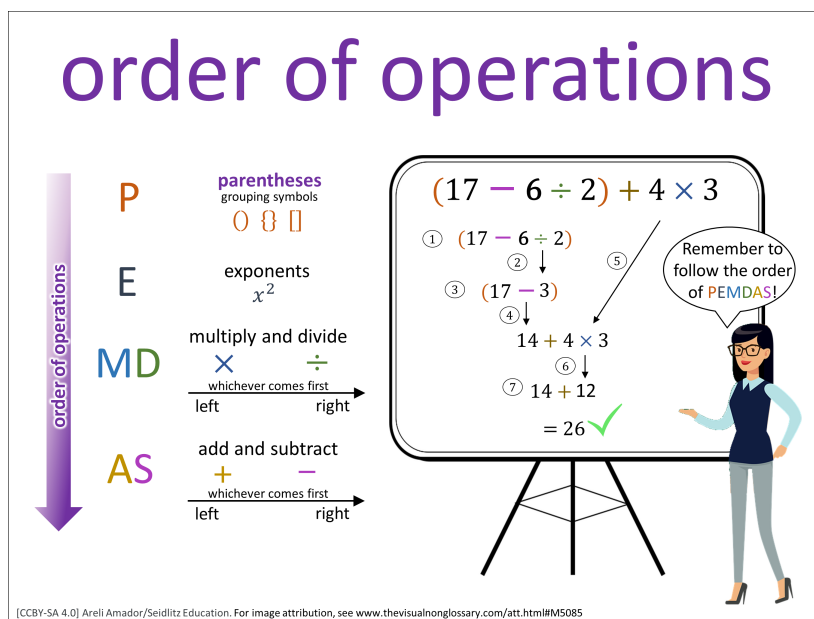
Following the **order of operations** helps us work through math problems in the right way.

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 $+$ $-$
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order of operations (vertical arrow pointing down)

Example: $(17 - 6 \div 2) + 4 \times 3$

Steps:

1. $(17 - 6 \div 2)$
2. $6 \div 2$
3. $(17 - 3)$
4. $17 - 3$
5. $14 + 4 \times 3$
6. 4×3
7. $14 + 12$

Result: $= 26$ ✓

Remember to follow the order of PEMDAS!

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When solving a math expression with more than one operation, it's important to follow a set of rules called the **order of operations**. These rules help us decide which step to do first, next, and last.

For example, in the expression $5 + 3 \times 2$, we begin with multiplication: 3×2 equals 6. Then we add $5 + 6$ to get 11. This sequence follows the correct **order of operations**.

Sometimes, expressions include **parentheses** to show which part to solve first. In $(5 + 3) \times 2$, the **parentheses** tell us to add before multiplying. Expressions can look similar but be solved differently depending on the placement of **parentheses**.

Using the **order of operations** helps people solve math expressions in a clear and consistent way.

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$(17 - 6 \div 2) + 4 \times 3$

① $(17 - 6 \div 2)$

② $\downarrow$

③ $(17 - 3)$

④ $\downarrow$

⑤ $14 + 4 \times 3$

⑥ $\downarrow$

⑦ $14 + 12$

$= 26$ ✓

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Mathematical expressions often contain several operations. To solve them accurately, we use the **order of operations**—a set of steps that guide the correct order for solving.

Consider this expression: $5 + 3 \times 2$. The rule tells us to multiply first, so 3×2 equals 6. Then we add $5 + 6$ to get 11. This approach ensures consistency.

Now imagine a similar expression: $(5 + 3) \times 2$. Here, the **parentheses** signal a different starting point. We add $5 + 3$ first, then multiply the result by 2. The use of **parentheses** can shift how we approach and solve an expression.

The **order of operations** helps keep mathematical work organized and predictable.