# INTEGER OPERATIONS

## What Are Integer Operations?

**Integer operations** are the mathematical operations that involve integers. Integers are negative numbers, zero and positive numbers.

- When **adding** and subtracting **integers**, specific rules must be followed. Adding and subtracting integers are useful in everyday life because there are many situations that involved negative numbers such as calculating sea level or temperatures.

- When **multiplying and dividing integers**, specific rules must also be followed. To multiply and divide, first the numbers are either

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- Inequalities are also solved by using inverse operations. When solving equations and inequalities, the rules for the mathematical operations must be used in order to achieve the correct answer.

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## How to use integer operations

Operations with integers involve negative numbers, zero and positive numbers. When performing integer operations, certain rules must be used.

- **To add integers with different signs**, subtract the absolute value of the integers and write the sign of the larger absolute value.

- **To add integers with the same sign**, add the absolute value of the integers and write the common sign.

**Ex. -8 + 5 = |-8| - |5| = -3,**

the answer is -3 because 8 is larger than 5

**-7**

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**Ex. (-5)(-7) = +35 (-6)(9) = -54**

- Equations and inequalities are solved with inverse operations. When solving with integers, the rules for each mathematical operation must be used. Remember when multiplying or dividing by a negative number, the inequality sign is reversed.

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## Try This!

1. **Add** the integers:

   9 + (-5) = ?  -4 + 6 = ?  -3 + (-7) = ?

2. **Subtract** the integers:

   9 - 12 = ?  -2 - 3 = ?  -6 - (-10) = ?

3. **M**

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4. **S**

   6x = -42

   -1/5x = 4

5. **Solve** the inequality for x:

   x + 3 ≤ -7

   -9x > 36

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