

# 7th Grade Math – Integer Cheat Sheet for Families (With Examples)

## What Are Integers?

Integers are whole numbers and their opposites, including positive numbers, negative numbers, and zero.

**Examples:**  $-5, -2, 0, 3, 8$

## Integers on a Number Line

Positive numbers are to the right of zero. Negative numbers are to the left of zero. Moving right means the value increases; moving left means the value decreases.

## Adding Integers

Same Signs: Add the numbers and keep the sign.

- $-4 + -6 = -10$
- $5 + 7 = 12$

Different Signs: Subtract and keep the sign of the number with the greater value.

- $9 + (-3) = 6$
- $-8 + 5 = -3$

## Subtracting Integers

Subtracting is the same as adding the opposite.

Change the subtraction sign to addition and change the sign of the second number.

**Examples:**

- $6 - (-2) \rightarrow 6 + 2 = 8$
- $-3 - 5 \rightarrow -3 + (-5) = -8$

## Multiplying Integers

Same Signs → Positive

- $(-4)(-3) = 12$
- $(5)(2) = 10$

Different Signs → Negative

- $(-6)(4) = -24$

## Dividing Integers

Division follows the same sign rules as multiplication.

**Examples:**

- $-12 \div -3 = 4$
- $15 \div -5 = -3$

## Looking Ahead

Once students understand integer operations, they will apply the same rules to **rational numbers**, which include fractions and decimals. By the end of the year, students should be able to solve algebraic equations that contain rational numbers.