Negative Reciprocal

Examples & Non-Examples

Example	Example	Non-Example
$2 \rightarrow -\frac{1}{2}$	$-\frac{3}{4} \rightarrow \frac{4}{3}$	$\frac{2}{5} \rightarrow -\frac{2}{5}$

Definition

The **negative reciprocal** of a number is found by two steps:

1. **Take the reciprocal** – flip the number (e.g., the reciprocal of $\frac{a}{b}$ is $\frac{b}{a}$).
2. **Make it negative** – change the sign.

In other words:

If a number is m, then its **negative reciprocal** is $-\frac{1}{m}$.

Examples:

- The negative reciprocal of 2 is $-\frac{1}{2}$.
- The negative reciprocal of $-\frac{3}{4}$ is $\frac{4}{3}$.

Use in Geometry:

Negative reciprocals are especially important when working with **perpendicular lines**. If two lines are perpendicular, their slopes are **negative reciprocals** of each other.