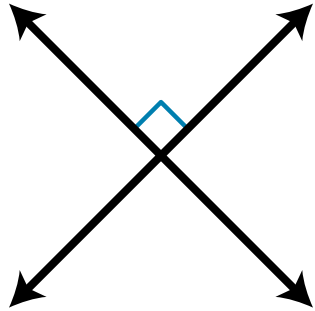
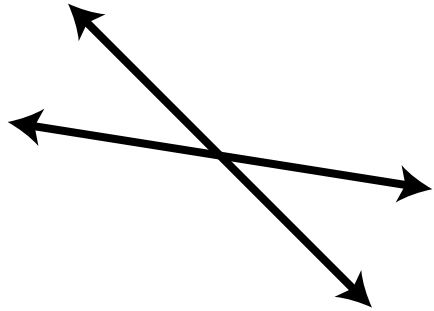


Perpendicular Lines

Examples & Non-Examples

Example	Example	Non-Example
	$y = -\frac{2}{5}x + 7$ $y = \frac{5}{2}x - 1$	

Definition

Perpendicular lines are lines that **intersect at a right angle**, which means they meet to form a **90-degree angle**.

In Coordinate Geometry:

If two **non-vertical** lines are perpendicular, their slopes are **negative reciprocals** of each other.

So if line A has a slope of m , line B is perpendicular to it if its slope is $-\frac{1}{m}$.

Example 1:

- Line A : $y = 3x + 2$
- Perpendicular Line B : $y = -\frac{1}{3}x + 5$

Why? The slope of 3 becomes $-\frac{1}{3} \rightarrow$ **negative reciprocal**.

Example 2:

- Line A : $y = -\frac{2}{5}x + 7$
- Perpendicular Line B : $y = \frac{5}{2}x - 1$

Why? The slope of $-\frac{2}{5}$ becomes $\frac{5}{2}$.

