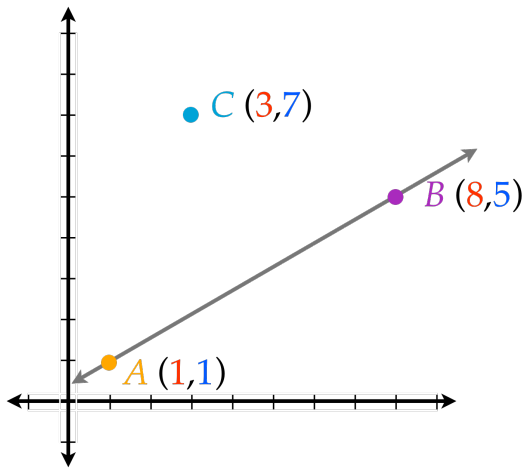


Slopes of Parallel and Perpendicular Lines

The **Slope**, m , of a line containing two points with coordinates (x_1, y_1) and (x_2, y_2) is given by...

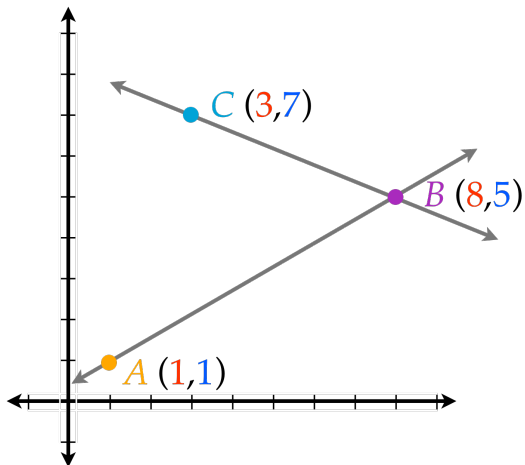
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$



Determine the **slope** of \overleftrightarrow{AB}

The **Slope**, m , of a line containing two points with coordinates (x_1, y_1) and (x_2, y_2) is given by...

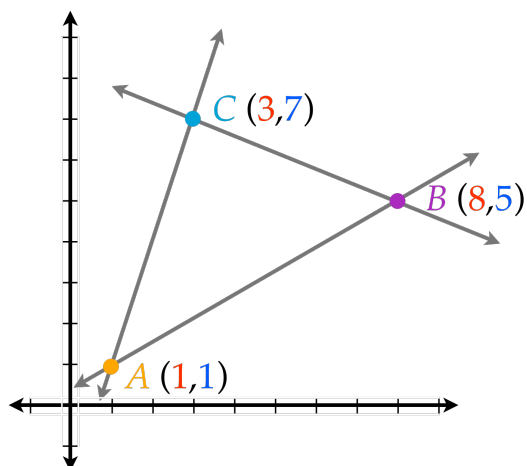
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$



Determine the **slope** of \overleftrightarrow{CB}

The **Slope**, m , of a line containing two points with coordinates (x_1, y_1) and (x_2, y_2) is given by...

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

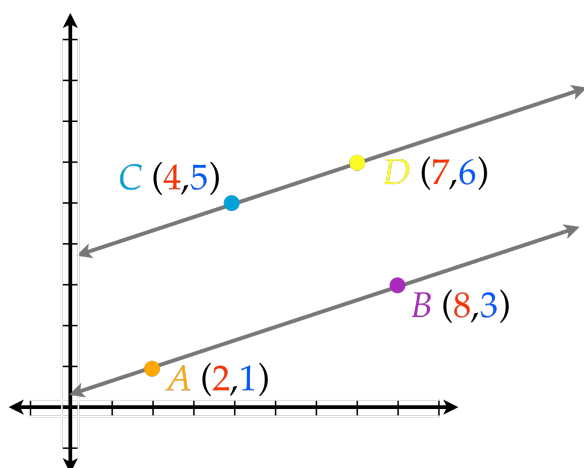


Determine the **slope** of \overleftrightarrow{AC}

Two non-vertical lines have the same **slope** if and only if those lines are parallel.

Parallel lines have the same **slope**

Determine if $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$



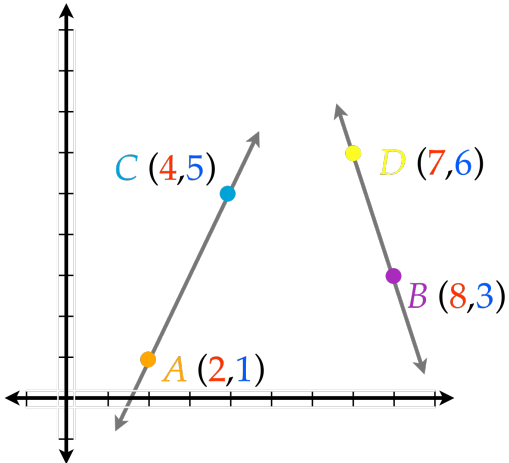
slope of \overleftrightarrow{AB}

slope of \overleftrightarrow{CD}

Two non-vertical lines have the same **slope**
if and only if those lines are parallel.

Parallel lines have the same **slope**

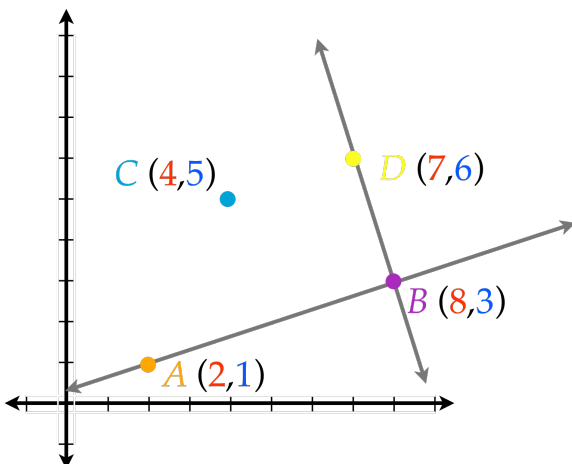
Determine if $\overleftrightarrow{AC} \parallel \overleftrightarrow{BD}$



Two non-vertical lines have opposite reciprocal **slopes**
if and only if those lines are perpendicular.

Perpendicular lines have opposite reciprocal **slopes**

Determine if $\overleftrightarrow{AB} \perp \overleftrightarrow{BD}$



slope of \overleftrightarrow{AB}

slope of \overleftrightarrow{BD}

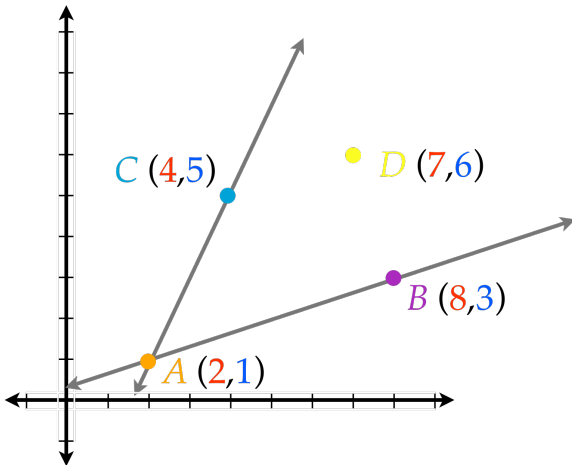
Two non-vertical lines have opposite reciprocal **slopes**
if and only if those lines are perpendicular.

Perpendicular lines have opposite reciprocal **slopes**

Determine if $\overleftrightarrow{AB} \perp \overleftrightarrow{AC}$

slope of \overleftrightarrow{AB}

slope of \overleftrightarrow{AC}



The **Slope**, m , of a line containing two points with
coordinates (x_1, y_1) and (x_2, y_2) is given by...

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Two non-vertical lines have the same **slope**
if and only if those lines are parallel.

Parallel lines have the same **slope**

Two non-vertical lines have opposite reciprocal **slopes**
if and only if those lines are perpendicular.

Perpendicular lines have opposite reciprocal **slopes**