

### Content and Language Objectives

Students will define special angle relationships and practice writing definitions that describe geometric relationships after:

- observing models of how to describe geometric relationships
- creating graphic organizer to identify the special angle relationships

### Warm-Up

$$4x + 3y = 12$$

1. solve for 'y'

2. slope?  $-\frac{4}{3}$

3. y-intercept? 4

$$\begin{array}{r} 4x + 3y = 12 \\ -4x \phantom{+ 3y} = -4x \\ \hline 3y = 12 - 4x \\ \frac{3y}{3} = \frac{12}{3} - \frac{4x}{3} \\ y = 4 - \frac{4}{3}x \end{array}$$

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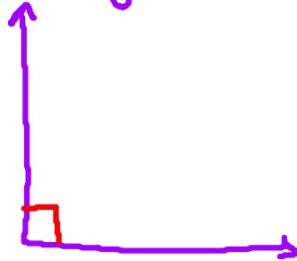
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### VOCABULARY

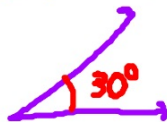
Right Angle

A right angle is an angle that measures  $90^\circ$



Acute Angle


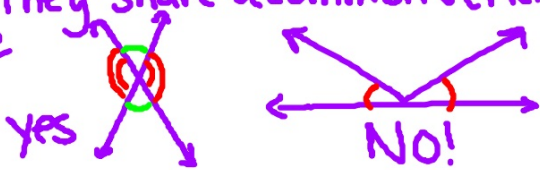
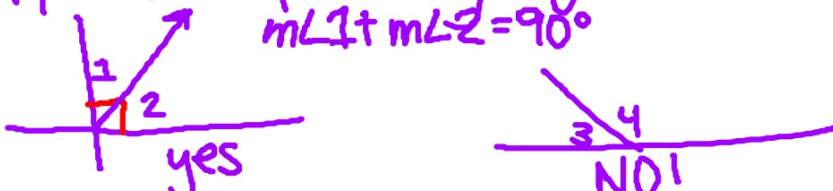
An acute angle is an angle that measures less than  $90^\circ$ .



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Obtuse Angle	<p>An obtuse angle is an angle that measures more than <math>90^\circ</math> but less than <math>180^\circ</math>.</p>  <p>A diagram showing an obtuse angle formed by two rays meeting at a vertex. The angle is labeled <math>135^\circ</math> in red.</p>
Vertical Angles	<p>Vertical angles are angles formed by 2 intersecting lines, they share a common vertex but not a common side</p>  <p>Two diagrams are shown. The first shows two intersecting lines forming four angles; a pair of opposite angles is circled in green and labeled 'yes'. The second shows two adjacent angles sharing a common side and vertex, labeled 'NO!'.</p>
Complimentary Angles	<p>A pair of complementary angles has a sum of <math>90^\circ</math> <math>m\angle 1 + m\angle 2 = 90^\circ</math></p>  <p>Two diagrams are shown. The first shows two adjacent angles, labeled 1 and 2, sharing a common side and vertex, with a right angle symbol between them, labeled 'yes'. The second shows two adjacent angles, labeled 3 and 4, sharing a common side and vertex, labeled 'NO!'.</p>

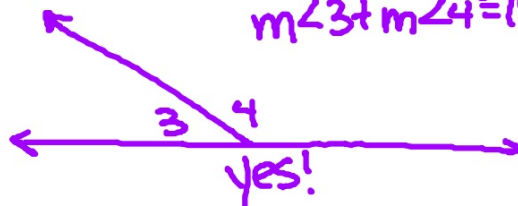
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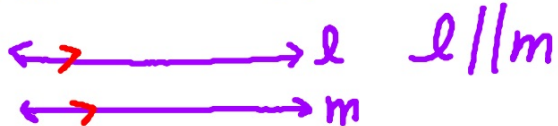
Supplementary  
Angles

A pair of supplementary angles add up to  $180^\circ$   
 $m\angle 3 + m\angle 4 = 180^\circ$



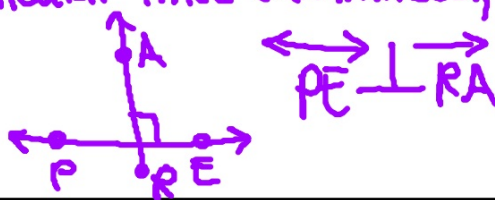
Parallel Lines

Parallel lines go in the same direction and never intersect



Perpendicular  
Lines

Perpendicular lines can intersect, they form a  $90^\circ$  angle



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Linear Pair

Two angles are a linear pair if they share a vertex, and a common side; their non-common side will form a line

