

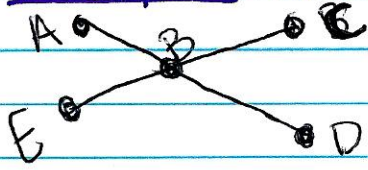
7.1 Adjacent & Vertical Angles

EQ: What can you conclude about angles formed by two intersecting lines?

Intersecting lines: lines that cross.

word	definition	example
Acute \angle (angle)	$\angle 90^\circ$	
Right \angle	$= 90^\circ$	
Obtuse \angle	$> 90^\circ, < 180^\circ$	
Straight \angle	$= 180^\circ$	
Adjacent Angles	<ul style="list-style-type: none"> • next to each other • share a vertex and a side 	
Vertical Angles	<ul style="list-style-type: none"> • across or "opposite" • they are congruent or "equal" 	

Example 1: Name a pair of adjacent & vertical angles.



Adjacent
 $\angle ABC + \angle CBD$
 $\angle ABE + \angle CBD$

Vertical
 $\angle ABC + \angle EBD$
 $\angle ABE + \angle CBD$

Example 2: Tell if the angles are adjacent or vertical. Then find x.

①
 adjacent
 $180 - 120$
 $x = 60^\circ$

②
 adjacent
 $90 - 60$
 $x = 30^\circ$

③
 vertical
 $x = 50^\circ$
 *vertical angles are equal! *