

## Geometry BELL WORK

Find each angle measure.

(Lesson 1-5)

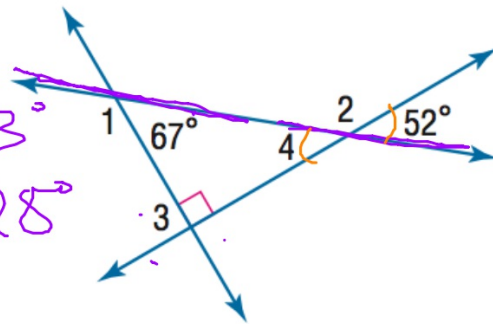
5.  $\angle 1 = 180 - 67 = 113^\circ$

6.  $\angle 2 = 180 - 52 = 128^\circ$

7.  $\angle 3 = 90^\circ$

8.  $\angle 4 = 52^\circ$

Vertical



**CHAPTER**

**3**

# **Parallel and Perpendicular Lines**

## 3-1 Parallel Lines and Transversals



Today we will:

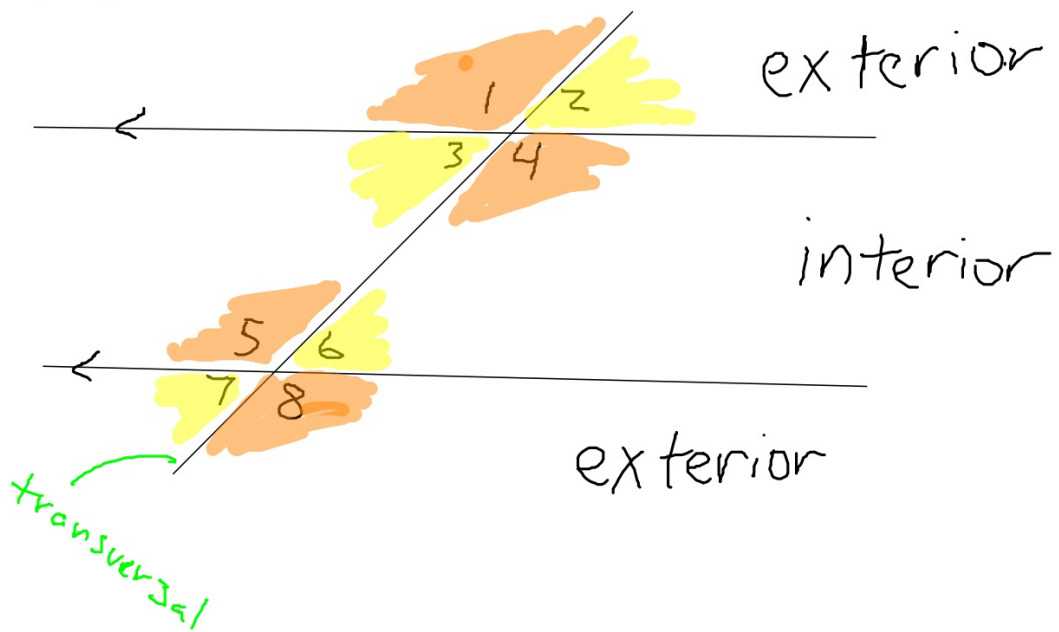
- \* Identify the relationships between two lines or two planes
- \* Name angle pairs formed by parallel lines and transversals

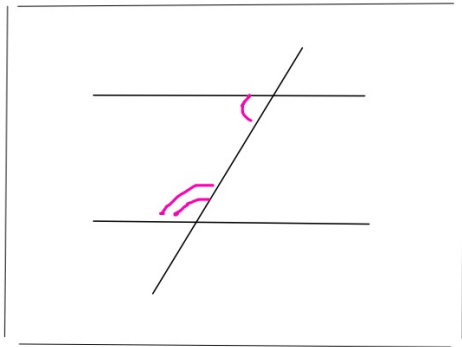
**(G.CO.C.9 Congruence: Prove theorems about lines and angles**

Top section:

# Parallel Lines and Transversals

 +  =  $180^\circ$



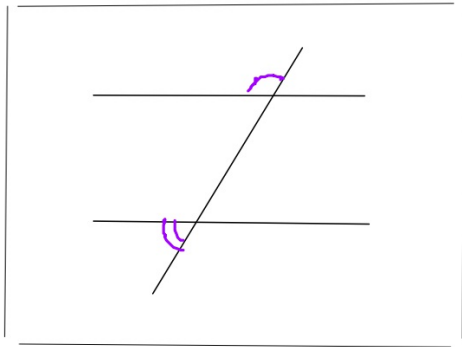


$$\angle 3 + \angle 5 = 180^\circ$$

$$\angle 4 + \angle 6 = 180^\circ$$

(are supplementary)

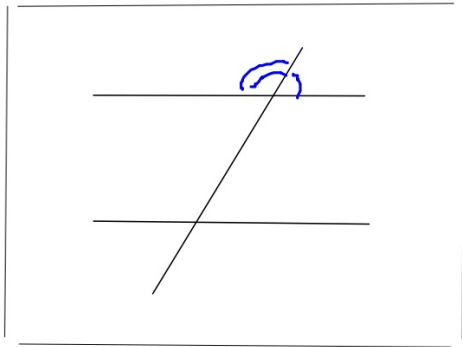
Consecutive  
interior  
angles



$$\angle 1 + \angle 7 = 180^\circ$$

$$\angle 2 + \angle 8 = 180^\circ$$

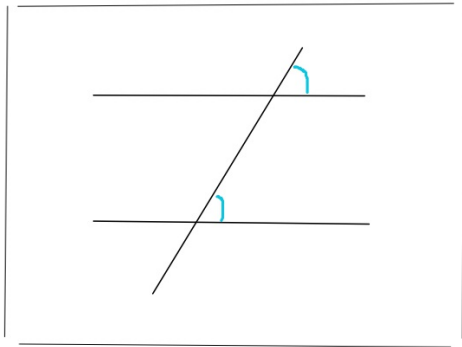
Consecutive  
exterior  
angles  
(supplementary)



$\angle 1 + \angle 2$	$1 + 3$
$\angle 3 + \angle 4$	$2 + 4$
$\angle 5 + \angle 6$	$5 + 7$
$7 + 8$	$6 + 8$

Linear  
Pair

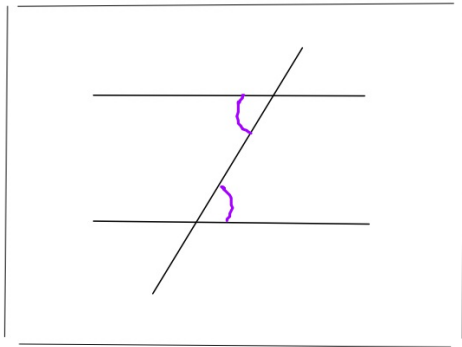
supplementary



corresponding  
angles  
(congruent)

$$\begin{aligned}\angle 2 &\cong \angle 6 \\ \angle 3 &\cong \angle 7 \\ \angle 1 &\cong \angle 5 \\ \angle 4 &\cong \angle 8\end{aligned}$$

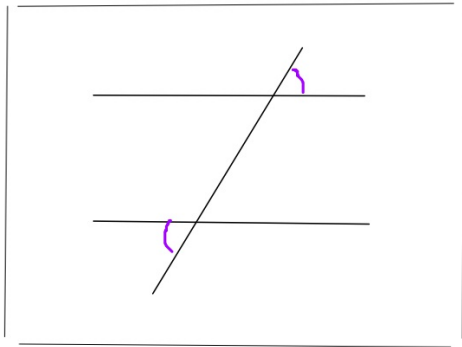




alternate  
interior  
angles  
(congruent)

$$\angle 3 \cong \angle 6$$

$$\angle 4 \cong \angle 5$$



alternate  
exterior  
angles  
(congruent)

$$\angle 2 \cong \angle 7$$

$$\angle 1 \cong \angle 8$$