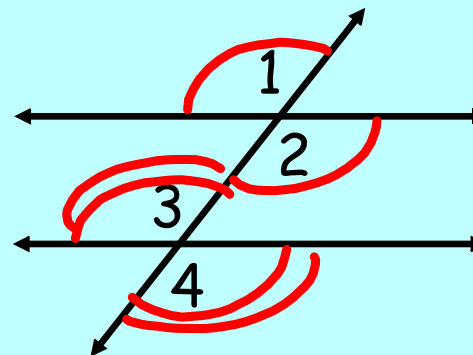


10/9/19 - Warm Up Problem

Given: $\angle 1 \cong \angle 4$

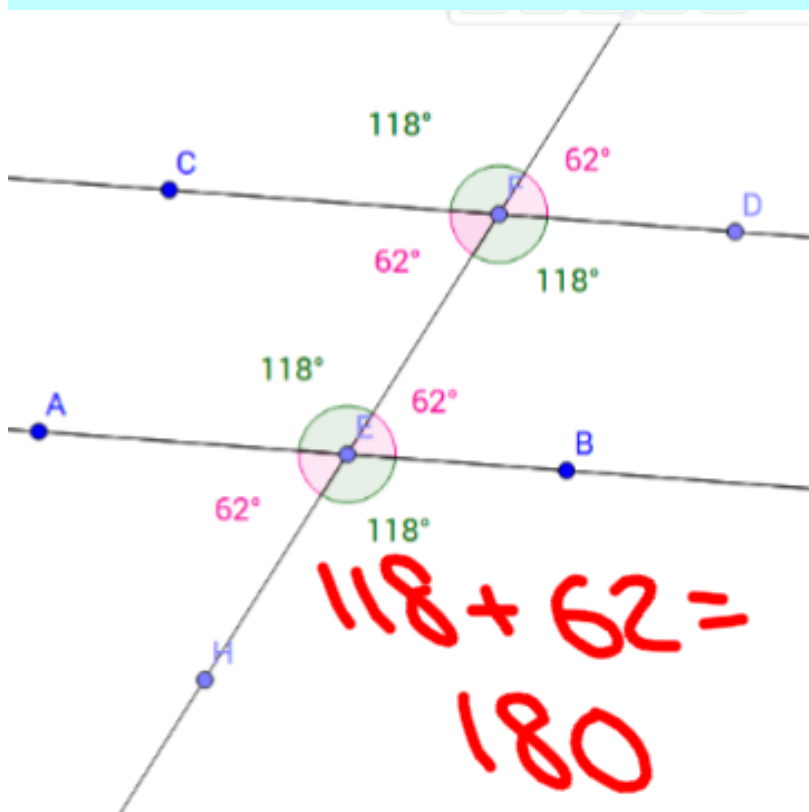
Prove: $\angle 3 \cong \angle 2$



Statements	Justifications
1. $\angle 1 \cong \angle 4$	given
2. $\angle 1 \cong \angle 2$	vertical angle thm.
3. $\angle 3 \cong \angle 4$	
4. $\angle 2 \cong \angle 4$	transitive congruent
5. $\angle 3 \cong \angle 2$	transitive

Concept 7 - Angle Pairs formed by a Transversal

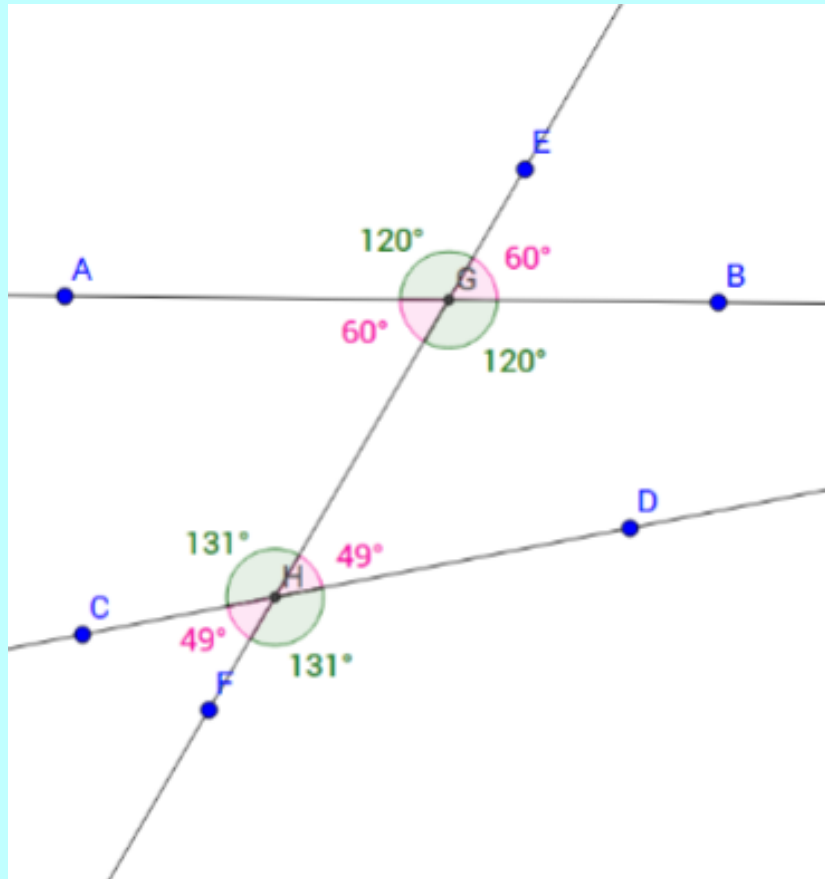
Goal: Identify pairs of angles formed by a transversal and use theorems to find angle measures when lines are parallel



When two parallel lines are intersected by a transversal, which angles are congruent?

If the angles are not congruent, how are they related?

What happens if the lines are not parallel?



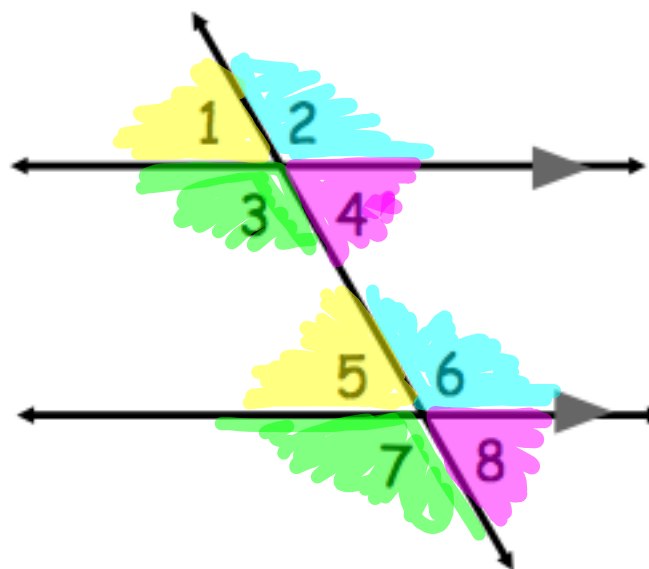
What happens when the transversal is not crossing parallel lines?

Angle Pairs formed by a Transversal

Corresponding Angles Theorem

If a transversal intersects two
parallel lines, then corresponding
angles are...

Congruent

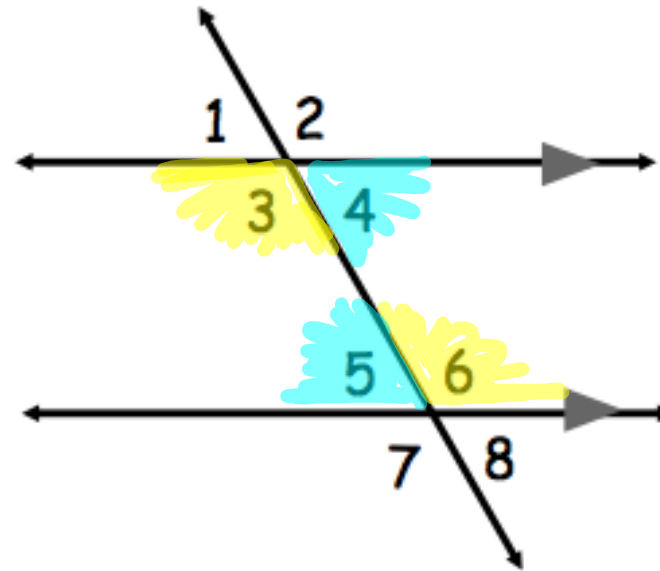


Angle Pairs formed by a Transversal

Alternate Interior Angles Theorem

If a transversal intersects two
parallel lines, then alternate
interior angles are...

Congruent

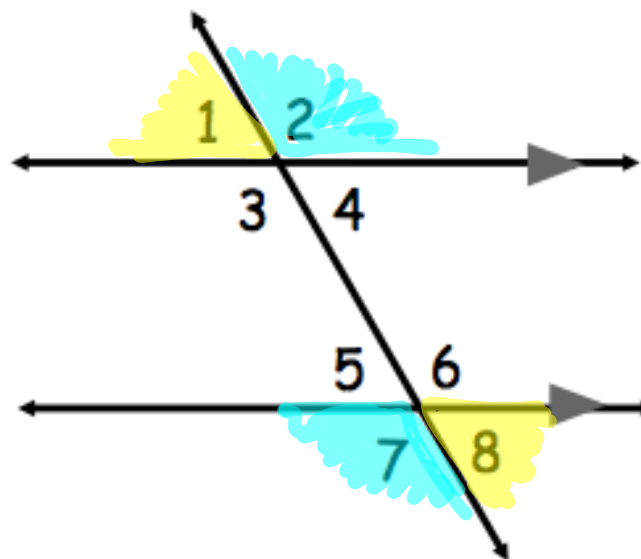


Angle Pairs formed by a Transversal

Alternate Exterior Angles Theorem

If a transversal intersects two parallel lines, then alternate exterior angles are...

Congruent



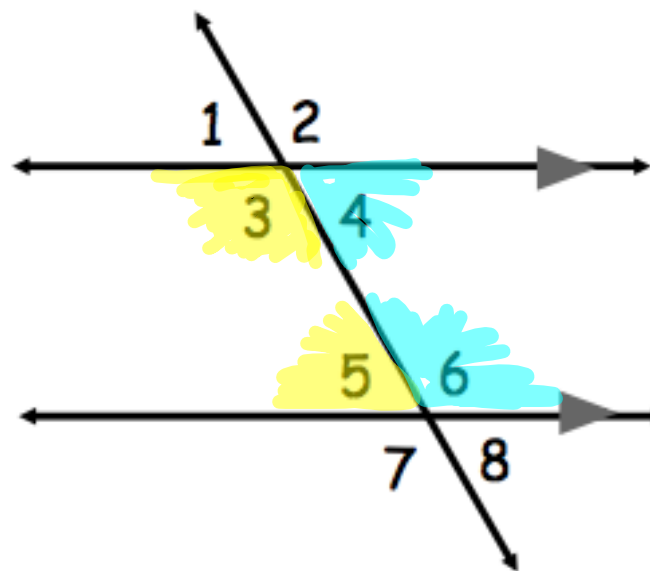
Angle Pairs formed by a Transversal

(consecutive)

Same-Side Interior Angles Postulate

If a transversal intersects two parallel lines, then same-side interior angles are...

Supplementary



Name each pair of angles.

1. Angles 3 and 7

corr.

2. Angles 6 and 11

Alt. Ext.

3. Angles 10 and 11

Vertical

4. Angles 2 and 5

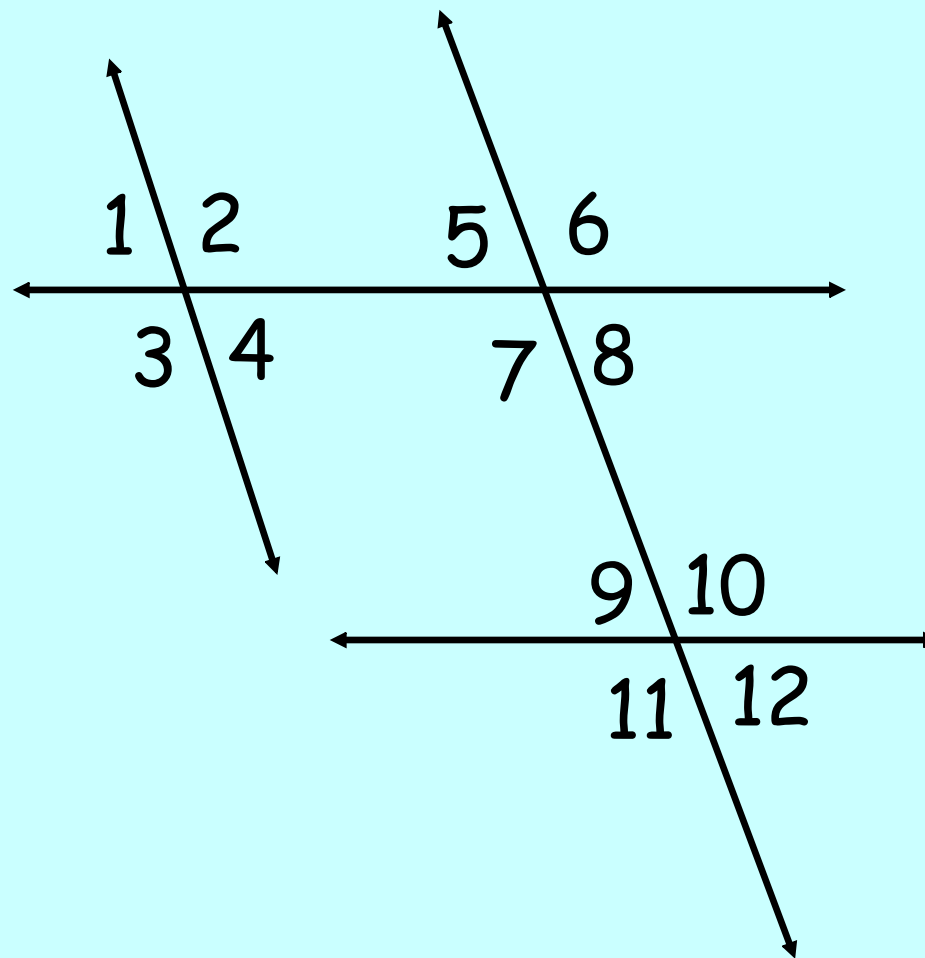
SS Int.

5. Angles 6 and 8

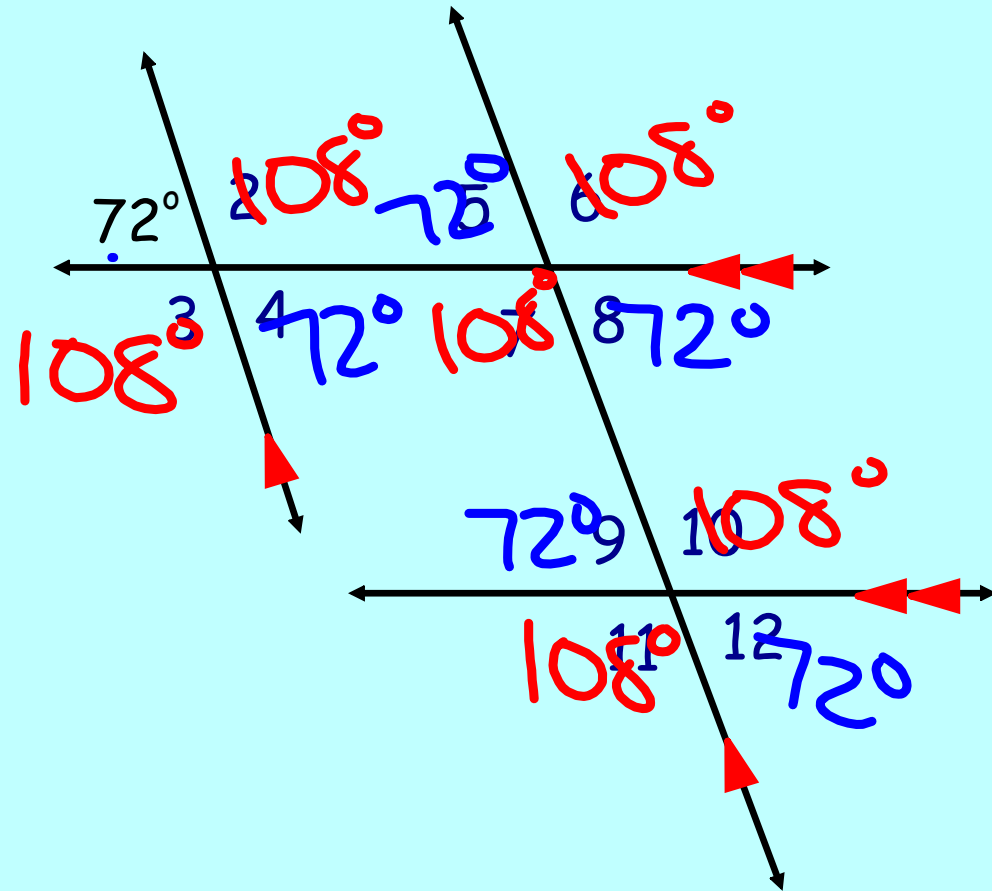
Linear Pair

6. Angles 8 and 9

Alt Int.



Which other angles
can we find the
measure of?

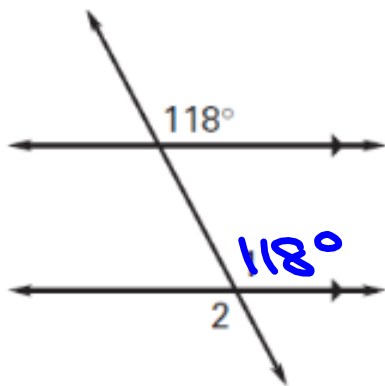


Assignment:

Concept 7 Worksheet (1-9)

Find the measure of each angle. Justify your answer by filling in the second blank with the name of the relevant angle pair.

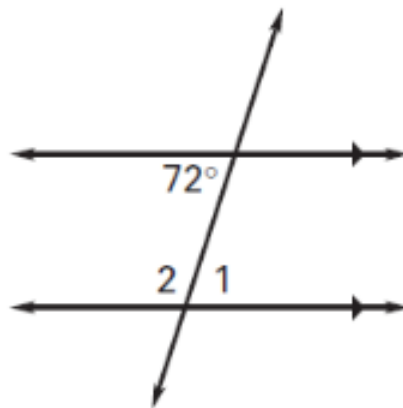
1.



$m\angle 1 = 118^\circ$ because it is
Corresponding with 118°

$m\angle 2 = 118^\circ$ because it is
Alt. Ext. with 118°

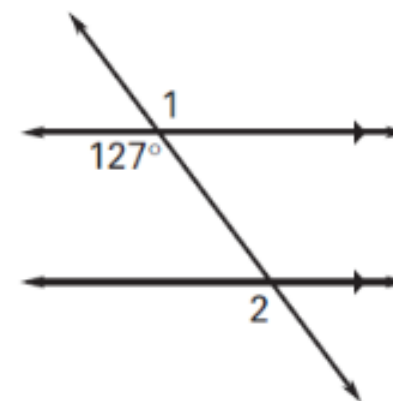
2.



$m\angle 1 = \underline{\hspace{2cm}}$ because it is
 _____ with 72°

$m\angle 2 = \underline{\hspace{2cm}}$ because it is
 _____ with 72°

3.



$m\angle 1 = \underline{\hspace{2cm}}$ because it is
 _____ with 127°

$m\angle 2 = \underline{\hspace{2cm}}$ because it is
 _____ with 127°