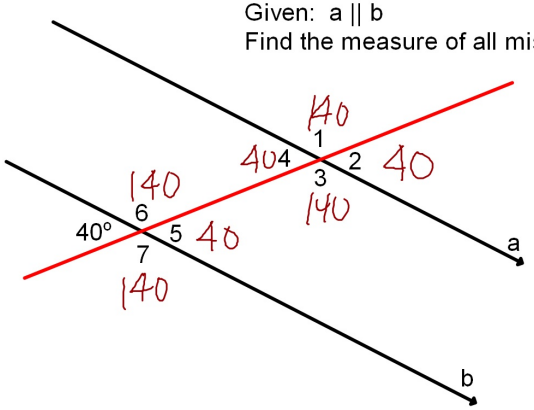
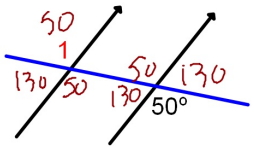
Given: a || b
Find the measure of all missing angles.

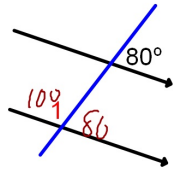


Find the measure of Angle 1 in each pair of parallel lines.

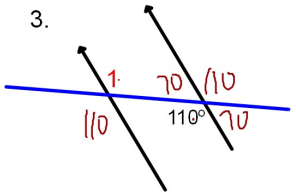
1.



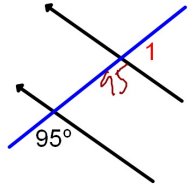
2.



3.

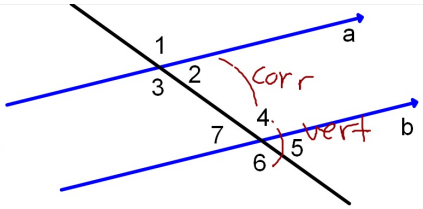


4.



How is Angle 1 related to Angle 6?

∠1 and ∠6 are called Alternate Exterior Angles



Given a || b

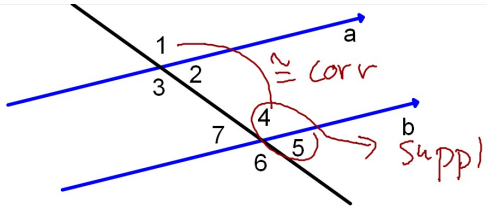
Prove: ∠1 ≅ ∠6

Statement	Reason
1. a || b	Given
2. ∠1 ≅ ∠4	corr ∠s ≅
3. ∠4 ≅ ∠6	vert ∠s ≅
4. ∠1 ≅ ∠6	Subst. or trans

Theorem: Alternate Exterior Angles are Congruent

How is Angle 1 related to Angle 5?

∠1 & ∠5 are called Same-Side Exterior Angles



Given a || b

Prove: ∠1 & ∠5 are supplementary

Statement	Reason
1. a || b	Given
2. ∠1 ≅ ∠4	corr ∠s ≅
3. ∠4 & ∠5 suppl	
4.	
5. ∠1 & ∠5 suppl	

Theorem: Same-Side Exterior Angles are Supplementary

(Def of suppl or ∠ add post Subst