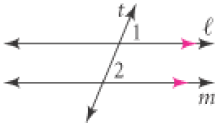


(3.2) Angles and Parallel Lines.notebook

November 30, 2018

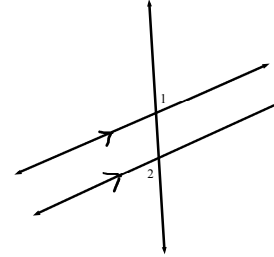
Objectives: You will be able to use the properties of parallel line: and algebra to determine congruent angles.

Corresponding Angles Postulate: If two parallel lines are cut by a transversal, then the corresponding angles are congruent.



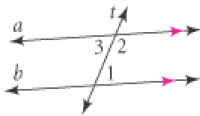
May 23-7:54 AM

Alternate Exterior Angles Theorem: If two parallel lines are cut by a transversal, then alternate exterior angles are congruent.



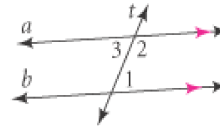
May 23-7:55 AM

Alternate Interior Angles Theorem: If two parallel lines are cut by a transversal, then alternate interior angles are congruent.



May 23-7:57 AM

Consecutive Interior Angles Theorem: If two parallel lines are cut by a transversal, same-side interior angles are supplementary

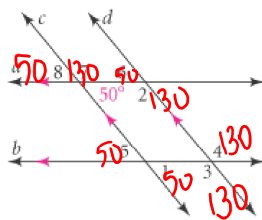


May 23-7:58 AM

Example #1:

Find the measurement of the following angles:

- $m\angle 1 = 50^\circ$
- $m\angle 2 = 130^\circ$
- $m\angle 3 = 130^\circ$
- $m\angle 4 = 130^\circ$
- $m\angle 5 = 50^\circ$
- $m\angle 6 = 50^\circ$
- $m\angle 7 = 130^\circ$
- $m\angle 8 = 50^\circ$



May 23-7:59 AM

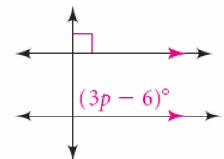
Example #2:

Find p

$$3p - 6 = 90$$

$$3p = 96$$

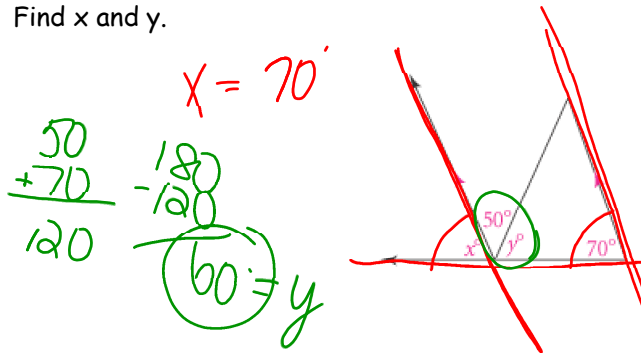
$$p = 32$$



May 23-8:01 AM

Example #3:

Find x and y.



May 23-8:01 AM

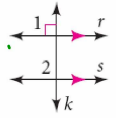
Example #4:

Complete the following proof:

In a plane, if a line is perpendicular to one of two parallel lines, then it is perpendicular to the other.

Given: $k \perp r, r \parallel s$ *per p. trans. thm.*

Prove: $k \perp s$



Statements	Reasons
1. $k \perp r$	1. Given
2. $\angle 1$ is a right angle.	a. def of \perp
3. $m\angle 1 = 90$	b. def of \perp
4. $r \parallel s$	4. Given
5. $m\angle 2 = m\angle 1$	c. corr. \angle post
6. $m\angle 2 = 90$	d. subst
7. $\angle 2$ is a right angle.	e. def of \perp
8. $k \perp s$	f. def of \perp

May 23-8:02 AM