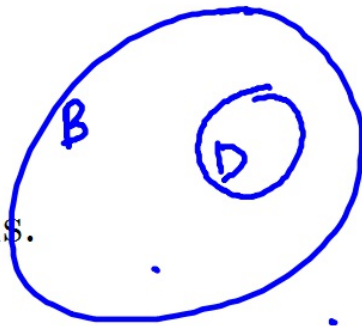


Good afternoon: Warm up in notebooks

Axioms:

All doodads are boozles.

Not all boozles are doodads.



Reminders:

- tutoring tomorrow 4-5p
- reassess in any DS except Weds.
- next assessment: Monday

Rate each as true or false:

1. If it is a boozle, then it is a doodad. **F**
2. If it's not a doodad, then it is not a boozle. **F**
3. If it is a doodad, then it is a boozle. **T**
4. If it is not a boozle, then it is not a doodad. **T**

[Hint: rewrite the axioms as a single if-then statement]

Assessments are being passed back  
 Record progress on your grade sheets  
 Skills tested: GPE-B5a and GPE-B7a

Didn't do well? Study and reassess!

Honors Geometry – 1<sup>st</sup> Quarter Assessment Grades

Name:

Key: CO – Congruence

GPE – Expressing Geometric Properties with Equations

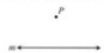
Most recent grade entered in Powerschool. Two consecutive scores of 3 or higher required. Each standard is assessed in class at least twice. Re-taking an assessment requires proof of completed homework. Full standards on web at: <http://j.mp/tenngeometry>

CO-A1a: Point/Lines/Planes: I know precise definition of line segment, based on the undefined notions of point, line, and distance along a line.



Date					
Score					

CO-A1b: Types of Lines: I know the precise definitions of parallel and perpendicular lines based on the undefined notions of point, line, and distance along a line.



Date					
Score					

CO-A1c: Angles and Circles: I know precise definitions of angles and circles, based on the undefined notions of point, line, and distance along a line, and distance around a circular arc.



Date					
Score					

CO-D12a: Constructions 1: I can make formal geometric constructions including: copying segment and angle, midpoint, perpendicular bisector, and angle bisector.

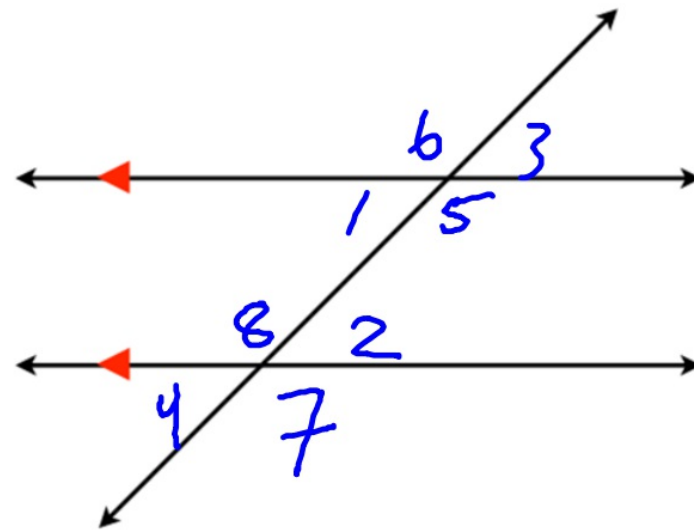
Date					
Score					

## Angle Relationships Practice

Label the angles in the diagram so that they have the relationships described in the table.

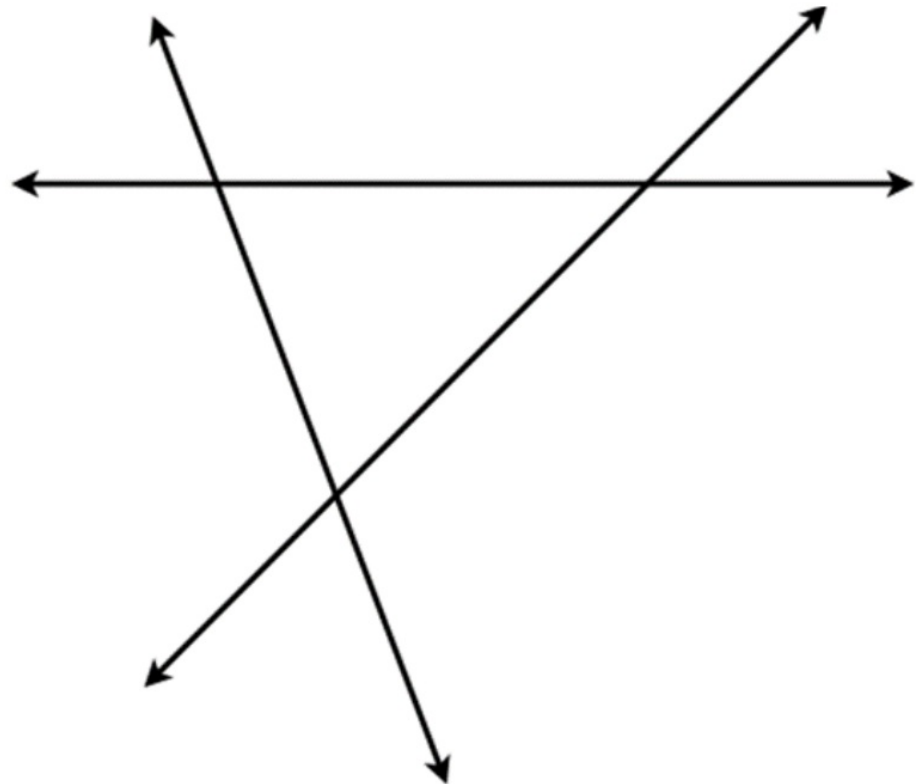
### Problem 1

Angles	Relationship
1, 2	Alternate Interior angles
3, 4	Alternate Exterior angles
6, 7	Alternate Exterior angles
6, 8	Corresponding angles
1, 3	Vertical angles
2, 5	Same-side Interior angles
2, 8	Linear Pair

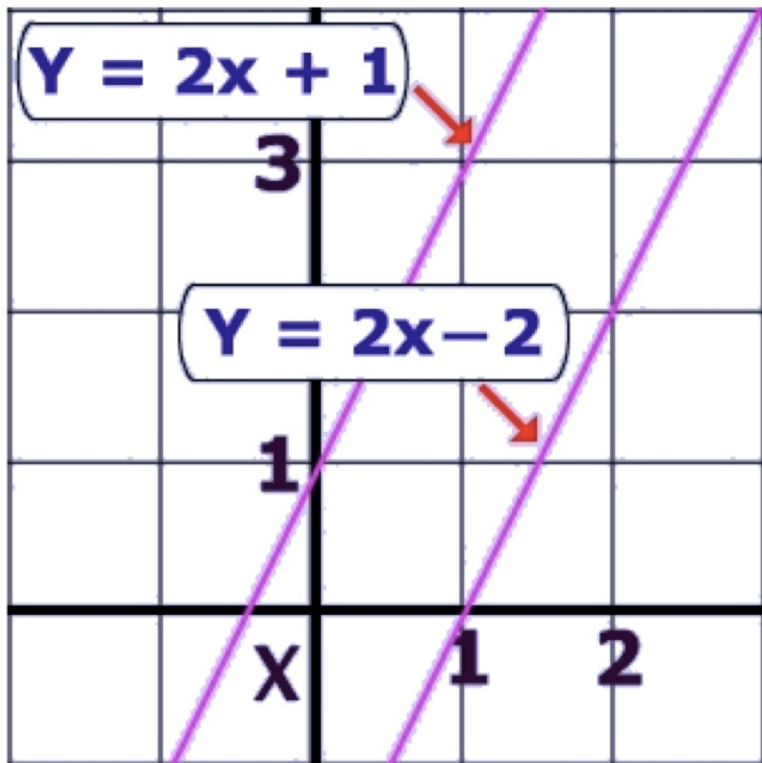


**\*Given:** Angles 1 and 4 are interior angles of the triangle.

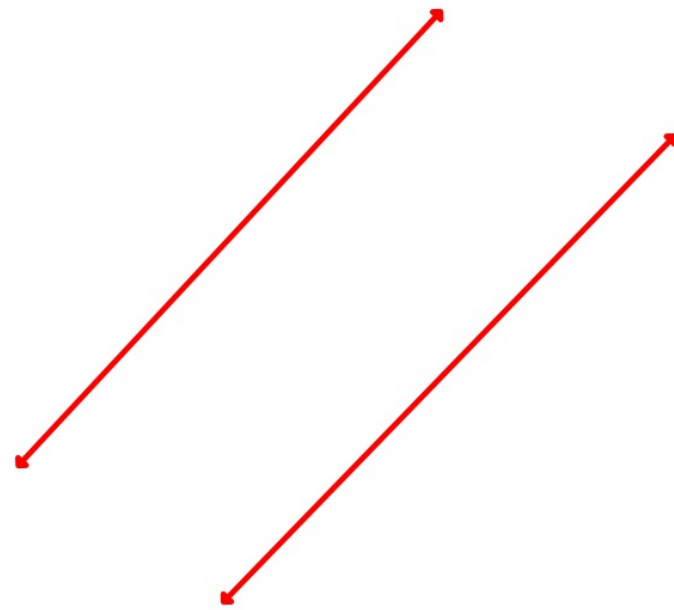
Angles	Relationship
3, 1	Alternate Interior angles
1, 10	Same-side interior
5, 1	Vertical angles
2, 10	Linear Pair
5, 2	Alternate exterior angles
10, 11	Corresponding angles
11, 1	Alternate interior angles
10, 12	Corresponding angles
9, 6	Corresponding angles
9, 11	Vertical angles
7, 3	Alternate exterior angles
2, 3	Vertical angles
8, 3	Same-side interior



Will these lines ever cross?



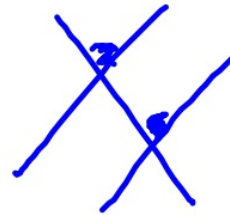
Will these??



To prove a statement in Euclidean geometry, you need to use logical reasoning

We start with a simple postulate:

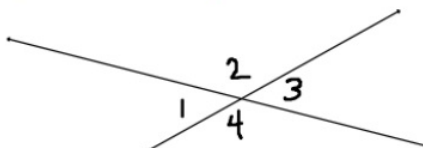
*Corresponding angles of parallel lines are congruent.*



[https://www.youtube.com/watch?  
v=b49JnSpiogE](https://www.youtube.com/watch?v=b49JnSpiogE)

What did our very first geometry proof establish?

My First Geometry Proof



Given: Two intersecting lines, angles  
1, 2, 3, and 4  
Prove:  $\angle 1 \cong \angle 3$

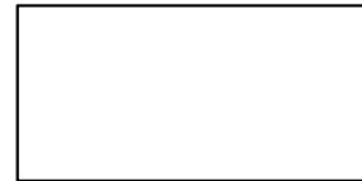
$\angle 1 + \angle 2 = 180^\circ$ , because they make  
 $\angle 2 + \angle 3 = 180^\circ$ , " " a line.

$\angle 1 + \cancel{\angle 2} = \cancel{\angle 2} + \angle 3$  by substitution  
 $\underline{\angle 1} \quad \underline{\angle 3} \Rightarrow \angle 1 = \angle 3. \text{ Q.E.D.}$

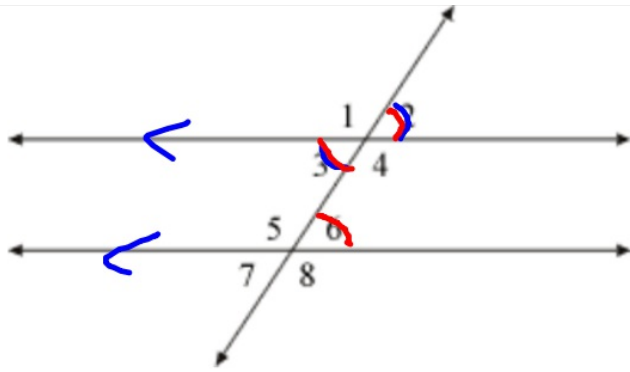
Theorem: If two angles are vertical angles, then they are congruent.

If two angles are vertical angles,  
then they are congruent.

THEOREM we can use this  
proven fact! in later proofs







Given:  $l \parallel m$

Prove:  $\angle 3 = \angle 6$

$\angle 2 \cong \angle 3$ , bec. vertical angles.

$\angle 2 \cong \angle 6$ , bec. they're corresponding  $\angle$ 's of par. lines

so,  $\angle 3 \cong \angle 6$  Alt. Interior Angles are  $\cong$ .  $\star$



Homework:

p. 87 #1-7 [CO-C9b]

Note: When you see something like  ~~$m$~~  $\angle 3 = 10x + 6$ , ignore the  $m$ . It just tells the "measure" of the angle.

