**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Oct. 21st, 2011**

**Geometry, Mrs. Sulkes**

**3.1 – Parallel Lines and Planes – Definitions**

***Read pages 73 – 74 to help you define the following terms. Also draw a diagram that describes each term. Then answer the questions that follow.***

1. Parallel Lines:

2. Skew Lines:

3. Parallel Planes:

4. Transversal:

5. Alternate Interior Angles:

6. Same-side Interior Angles:

7. Corresponding Angles:

State whether each is true or false.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_A transversal intersects only parallel lines.

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Skew lines are not coplanar.

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ If two lines are coplanar, then they are parallel.

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ If two lines are parallel, then exactly one plane contains them.

Complete each statement with *always, sometimes, or never.*

5. Two lines in the same plane are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ parallel.

6. Two lines in the same plane are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ skew.

7. Two noncoplanar lines \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ intersect.

8. Two planes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_intersect.

9. A line and a plane \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_have exactly one point of intersection.

10. If two planes do not intersect, then they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_parallel.

11. Draw one diagram that satisfies all the following conditions:

* line *k* is a transversal to lines *m* and *n*
* *m* II *n*
* the interior angles are 3,4,5,and 6
* 2 is a vertical angle to 
* 1 is a vertical angle to 
* 8 is a corresponding angle to 
*  is a corresponding angle to 
*  is a vertical angle to 