Name_____Date_____

3.1 – Lines and Angles

Use the diagram to name each of the following.

1) a pair of parallel planes

2) all lines that are parallel to $\overleftrightarrow{RV}$

3) four lines that are skew to $\overleftrightarrow{WX}$

4) all lines that are parallel to plane QUVR

5) a plane parallel to plane QUWS
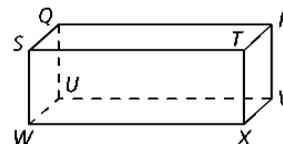
In #6–11, describe the statement as *true* or *false*. If false, explain.
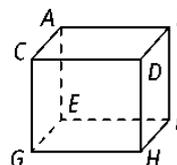
6) $\overleftrightarrow{AE}$ and $\overleftrightarrow{EF}$ are skew lines.

7) plane DBF ∥ plane ABD

8) $\overleftrightarrow{GH}$ ∥ $\overleftrightarrow{EF}$

9) $\overleftrightarrow{DB}$ ∥ $\overleftrightarrow{AE}$

10) plane EFH ∥ plane ABD

11) $\overleftrightarrow{FH}$ and $\overleftrightarrow{CD}$ are skew lines.

Identify all pairs of each type of angle in the diagram below right.

12) corresponding angles

13) same-side interior angles

14) alternate interior angles

15) alternate exterior angles
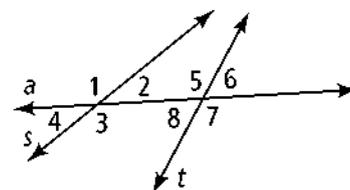
Decide whether the angles are *alternate interior angles, same-side interior angles, corresponding angles,* or *alternate exterior angles.*
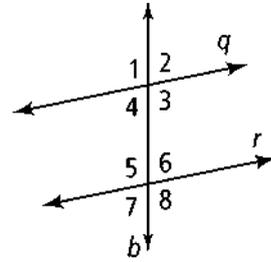
16) ∠2 and ∠7

17) ∠5 and ∠4   18) ∠8 and ∠3

19) ∠6 and ∠4   20) ∠1 and ∠5

21) Draw a diagram with trapezoid *ABCD* being intersected by line *k*. On this diagram, make sure it also meets all the following conditions. Please make sure to label the diagram correctly.

   a. $\overleftrightarrow{AB}$ and $\overleftrightarrow{DC}$ are parallel.

   b. ∠1 and ∠6 are alternate exterior angles.

   c. ∠2 and ∠3 are same-side interior angles.

   d. ∠4 and ∠5 are each supplementary to ∠3.

22) The map at the right shows the intersection of Maple Street and Oak Street by Main Street. Name the angle pairs represented by the locations listed below.
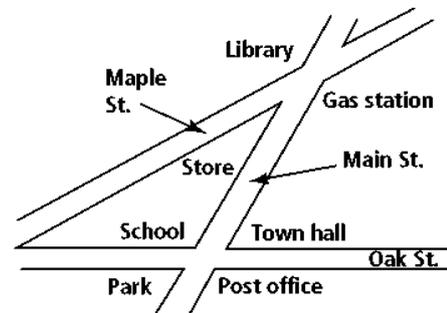
   a. town hall and gas station

   b. school and library

   c. library and post office

   d. school and gas station