**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Worksheet 8.4R**

**Period:\_\_\_\_\_\_\_\_\_\_\_\_\_ Geometry**

**Decide whether the statement is *sometimes, always,* or *never* true.**

1. A rectangle is a parallelogram.
2. A parallelogram is a rhombus.
3. A rectangle is a rhombus.
4. A square is a rectangle.

**Which of the following quadrilaterals have the given property? *Note: There may be more than one answer.***

**5.** All sides are congruent. **A.** Parallelogram

**6.** All angles are congruent. **B.** Rectangle

**7.**  The diagonals are congruent. **C.** Rhombus

**8.** Opposite angles are congruent. **D.** Square

**For any rectangle *ABCD*, decide whether the statement is *always*, *sometimes*, or *never* true. Draw a diagram!**

**9.** $∠A≅∠B$

**10.** $\overbar{AB}≅\overbar{BC}$

**11.** $\overbar{AC}≅\overbar{BD}$

**12.** $\overbar{AC}⊥\overbar{BD}$

**For any rhombus *ABCD*, decide whether the statement is *always*, *sometimes*, or *never* true. Draw a diagram!**

**13.** $∠A≅∠C$

**14.** $∠A≅∠B$

**15.** $∠ABD≅∠CBD$

**16.** $\overbar{AB}≅\overbar{BC}$

**17.** $\overbar{AC}≅\overbar{BD}$

**18.** $\overbar{AD}≅\overbar{CD}$

**List each quadrilateral for which the statement is true (i.e. parallelogram, rectangle, rhombus, and/or square).**

**19.** It is equiangular.

**20.** It is equiangular and equilateral.

**21.** The diagonals are perpendicular.

**22.** Opposite sides are congruent.

**23.** The diagonals bisect each other.

**24.** The diagonals bisect opposite sides.

**Find the value of *x*.**

**25.** *ABCD* is a square. **26.** *EFGH* is a rhombus.



**27.** *WZYZ* is a rectangle. The perimeter of $∆XYZ$ is 24. $XY+YZ=5x-1$ and $XZ=13-x$. Find *WY*.



***GHJK* is a square with diagonals intersecting at *L.* Given that *GH*=2 and** $GL=\sqrt{2}$**, complete the statement.**

**28.** *HK*=\_\_\_\_\_\_\_\_

**29.** $m∠KLJ=$\_\_\_\_\_\_\_\_\_\_\_\_

**30.** $m∠HJG=$\_\_\_\_\_\_\_\_\_\_\_\_

**31.** Perimeter of $∆HJK=$\_\_\_\_\_\_\_\_\_\_\_