

**Geometry**  
**Lesson 6-4 Notes**

A \_\_\_\_\_ is a quadrilateral with both pairs of opposite sides parallel.

A \_\_\_\_\_ is a quadrilateral with four right angles.

A \_\_\_\_\_ is a quadrilateral with four congruent sides.

A \_\_\_\_\_ is a quadrilateral with four right angles and four congruent sides.

**Properties of Quadrilaterals:**

**Parallelograms:**

If parallelogram, then \_\_\_\_\_.

**Rectangles:**

The 5 properties of a parallelogram, plus...

If rectangle, then \_\_\_\_\_.

If rectangle, then \_\_\_\_\_.

**Rhombi:**

The 5 properties of parallelograms, plus...

If rhombus, then \_\_\_\_\_.

If rhombus, then \_\_\_\_\_.

If rhombus, then \_\_\_\_\_.

If rhombus, then \_\_\_\_\_.

**Squares:**

The 5 properties of parallelograms, plus...

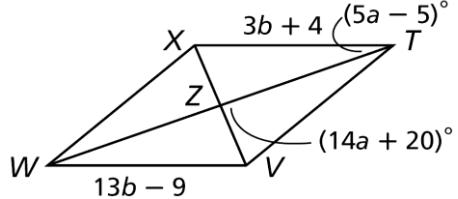
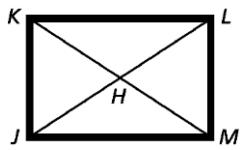
The 2 properties of rectangles, plus...

The 4 properties of rhombi, plus...

If square, then \_\_\_\_\_.

**Examples:**

1. A woodworker constructs a rectangular picture frame so that  $JK = 50$  and  $JL = 86$  cm. Find  $HM$ .



2.  $T\bar{V}\bar{W}\bar{X}$  is a rhombus.

a. Find  $TV$ .

b. Find  $m\angle VTZ$ .

3. Given:  $PQTS$  is a rhombus with diagonal  $\overline{PR}$

Prove:  $\overline{RQ} \cong \overline{RS}$

