**6.2 Properties of Parallelograms**

VOCABULARY:

**Parallelogram:** A parallelogram is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with both pairs of opposite sides parallel.

**Theorem 6.2**

**Words:** If a quadrilateral is a parallelogram, then its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sides are congruent.

**Symbols:** In , and.

Example 1:



a) is a parallelogram. Find and .



b) is a parallelogram, Find and .

**Theorem 6.3**

**Words:** If a quadrilateral is a parallelogram, then its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles are congruent.

**Symbols:** In , and.

**Theorem 6.4**

**Words:** If a quadrilateral is a parallelogram, then its consecutive angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Symbols:** In ,

Complete the following statements:

Opposite angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Consecutive angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Example 2:

PQRS is a parallelogram. Find the missing angle measures.

**Theorem 6.5**

**Words:** If a quadrilateral is a parallelogram, then its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bisect each other.

**Symbols:** In , and .

Example 3: is a parallelogram. Find

