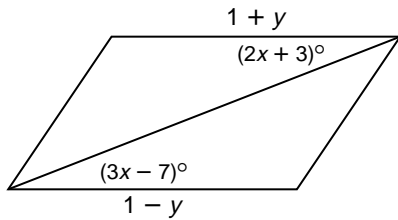


## Practice

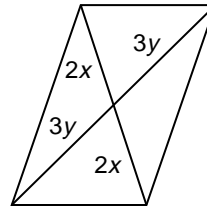
## Tests for Parallelograms

Find the values of  $x$  and  $y$  that insure each quadrilateral is a parallelogram.

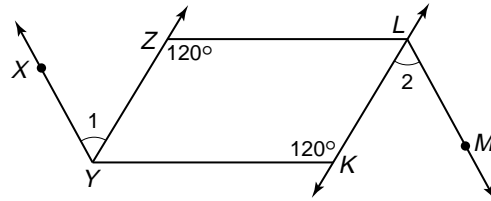
1.



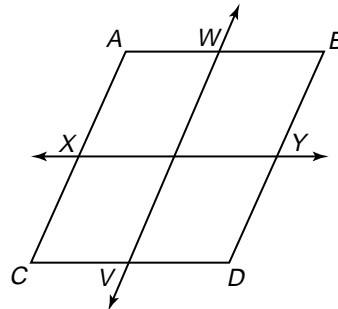
2.



3. Refer to the figure at the right.  $\overline{YZ}$  bisects  $\angle XYK$  and  $\overline{LK}$  bisects  $\angle ZLM$ . Also,  $\angle 1 \cong \angle 2$ . Is  $YZLK$  a parallelogram? Explain.



4. Refer to the figure at the right.  $\overline{AC} \cong \overline{WV}$  and  $\overline{BD} \cong \overline{WV}$ . Also,  $\overline{AB} \cong \overline{XY}$  and  $\overline{CD} \cong \overline{XY}$ . Is  $ABCD$  a parallelogram? Explain.



Determine whether quadrilateral  $ABCD$  with the given vertices is a parallelogram. Explain.

5.  $A(2, 5), B(5, 9), C(3, -1), D(6, 3)$

6.  $A(-1, 6), B(2, -3), C(5, 9), D(2, 7)$

7. **Identify Subgoals** Identify the subgoals you would need to accomplish to complete the proof.

**Given:**  $\overline{YN} \perp \overline{XZ}, \overline{ZM} \perp \overline{XY}$   
 $\overline{XZ} \cong \overline{XY}$   
 $\overline{XM} \cong \overline{XN}$

