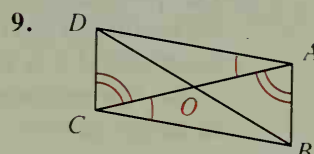
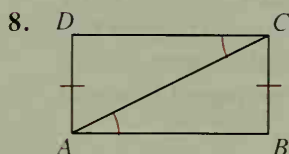
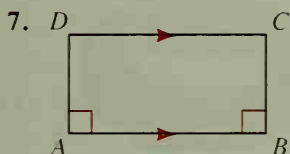
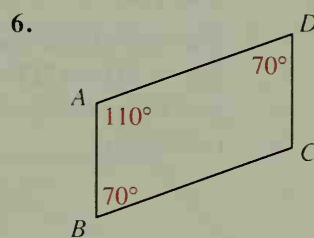
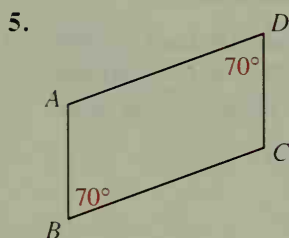
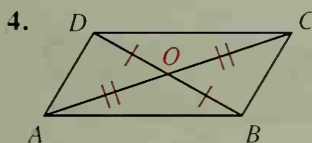
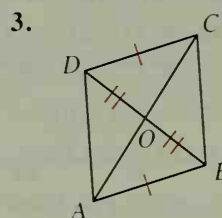
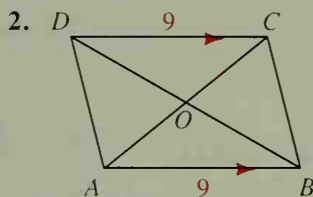
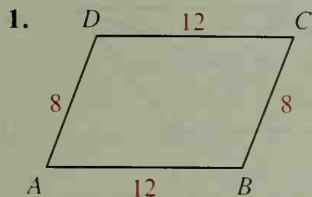


# Classroom Exercises

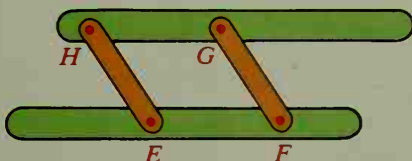
Study the markings on each figure and decide whether  $ABCD$  must be a parallelogram. If the answer is yes, state the definition or theorem that applies.



10. Draw a quadrilateral that has two pairs of congruent sides but that is *not* a parallelogram.

11. Draw a quadrilateral that is *not* a parallelogram but that has one pair of congruent sides and one pair of parallel sides.

12. Parallel rulers, used to draw parallel lines, are constructed so that  $EF = HG$  and  $HE = GF$ . Since there are hinges at points  $E, F, G$ , and  $H$ , you can vary the distance between  $\overleftrightarrow{HG}$  and  $\overleftrightarrow{EF}$ . Explain why  $\overleftrightarrow{HG}$  and  $\overleftrightarrow{EF}$  are always parallel.



13. The pliers shown are made in such a way that the jaws are always parallel. Explain.

