

**WARM-UP EXERCISES**

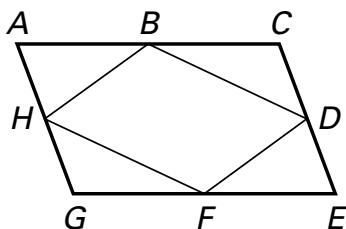
For use before Lesson 6.4, pages 347–355

1. In  $\square ABCD$ ,  $m\angle A = (3x + 15)^\circ$  and  $m\angle C = (5x - 17)^\circ$ . What is the value of  $x$ ?
2. Find the distance between  $K(1, 3)$  and  $M(3, 4)$ .
3. In  $\square KJLM$ ,  $KJ = 10y - 5$  and  $LM = -6y + 27$ . What is the value of  $y$ ?
4. The vertices of  $PQRS$  are  $P(-1, -3)$ ,  $Q(2, -4)$ ,  $R(5, -1)$ , and  $S(2, 0)$ . Is  $PQRS$  a parallelogram?

**DAILY HOMEWORK QUIZ**

For use after Lesson 6.3, pages 338–346

1. Describe how to prove that  $ACEG$  is a parallelogram given that  $\triangle BCD \cong \triangle FGH$  and  $\triangle DEF \cong \triangle HAB$ .



2. Prove that  $EFGH$  is a parallelogram by showing that a pair of opposite sides are both congruent and parallel. Use  $E(1, 2)$ ,  $F(7, 9)$ ,  $G(9, 8)$ , and  $H(3, 1)$ .
3. Prove that  $JKLM$  is a parallelogram by showing that the diagonals bisect each other. Use  $J(-4, 4)$ ,  $K(-1, 5)$ ,  $L(1, -1)$ , and  $M(-2, -2)$ .