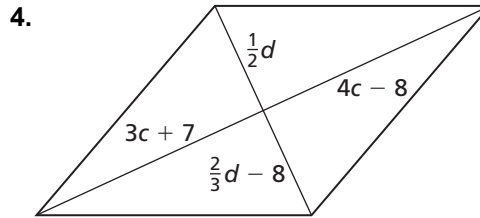
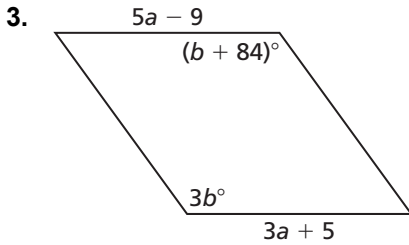
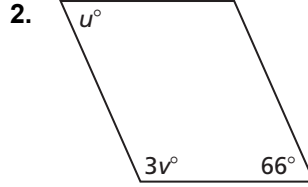
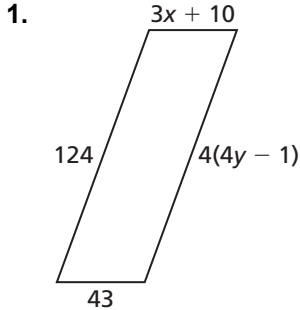


# 7.2

## Practice B

In Exercises 1–4, find the value of each variable in the parallelogram.



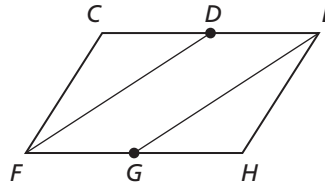
5. Find the coordinates of the intersection of the diagonals of the parallelogram with vertices  $(-2, -4)$ ,  $(-4, 4)$ ,  $(2, 12)$ , and  $(4, 4)$ .

6. Three vertices of parallelogram  $ABCD$  are  $A(1, 5)$ ,  $B(1, 1)$ , and  $D(2, 2)$ . Find the coordinates of the remaining vertex.

7. Use the diagram to write a two-column proof.

**Given:**  $CEHF$  is a parallelogram.  
 $D$  bisects  $\overline{CE}$  and  $G$  bisects  $\overline{FH}$ .

**Prove:**  $\triangle CDF \cong \triangle HGE$



8. State whether each statement is *always*, *sometimes*, or *never* true for a parallelogram. Explain your reasoning.

- The opposite sides are congruent.
- All four sides are congruent.
- The diagonals are congruent.
- The opposite angles are congruent.
- The adjacent angles are congruent.
- The adjacent angles are complementary.