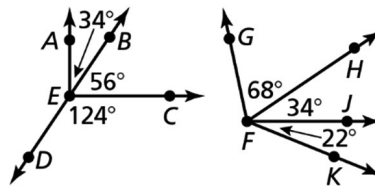


# 1.6

## Extra Practice

In Exercises 1–3, use the diagrams.

1. Name a pair of adjacent complementary angles.
2. Name a pair of nonadjacent complementary angles.
3. Name a pair of nonadjacent supplementary angles.



In Exercises 4 and 5, find the angle measure.

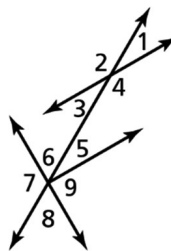
4.  $\angle 1$  is a complement of  $\angle 2$ , and  $m\angle 2 = 71^\circ$ . Find  $m\angle 1$ .
5.  $\angle 3$  is a supplement of  $\angle 4$ , and  $m\angle 4 = 26.7^\circ$ . Find  $m\angle 3$ .

In Exercises 6 and 7, find the measure of each angle.

6.  $\angle ABC$  and  $\angle CBD$  are supplementary angles,  $m\angle ABC = 7x^\circ$  and  $m\angle CBD = 8x^\circ$ .
7.  $\angle WXY$  and  $\angle YXZ$  are complementary angles,  $m\angle WXY = (2x + 5)^\circ$ , and  $m\angle YXZ = (8x - 5)^\circ$ .

In Exercises 8–11, use the diagram.

8. Identify the linear pair(s) that include  $\angle 2$ .
9. Identify the linear pair(s) that include  $\angle 8$ .
10. Are  $\angle 6$  and  $\angle 8$  vertical angles? Explain your reasoning.
11. Are  $\angle 7$  and  $\angle 9$  vertical angles? Explain your reasoning.



In Exercises 12–14, write and solve an algebraic equation to find the measure of each angle described.

12. The measure of an angle is  $9^\circ$  more than twice its complement.
13. Two angles form a linear pair. The measure of one angle is four times the measure of the other angle.
14. Two angles form a linear pair. The measure of one angle is  $51^\circ$  more than  $\frac{1}{2}$  the measure of the other angle.

In Exercises 15 and 16, tell whether the statement is *always*, *sometimes*, or *never* true. Explain your reasoning.

15. The sum of the measures of a linear pair of angles is  $90^\circ$ .
16. The sum of the measures of a pair of vertical angles is  $180^\circ$ .