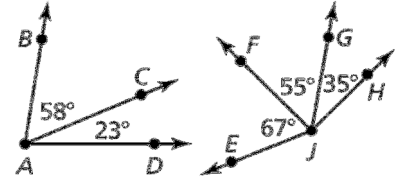Name_____ Date_____

1.6 Assignment

In Exercises 1–3, use the figures.

1. Name a pair of adjacent complementary angles.

2. Name a pair of nonadjacent complementary angles.

3. Name a pair of nonadjacent supplementary angles.

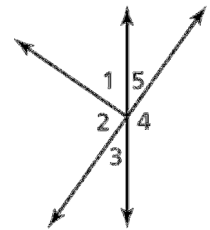**In Exercises 4 and 5, find the angle measure.**

4. $\angle 1$ is a complement of $\angle 2$, and $m\angle 2 = 36°$. Find $m\angle 1$.

5. $\angle 3$ is a supplement of $\angle 4$, and $m\angle 4 = 75°$. Find $m\angle 3$.

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

6. $\angle WXY$ and $\angle YXZ$ are supplementary angles,

    $m\angle WXY = (6x + 59)°$, and $m\angle YXZ = (3x - 14)°$.

7. $\angle ABC$ and $\angle CBD$ are complementary angles,
    $m\angle ABC = (3x + 6)°$, and $m\angle CBD = (4x - 14)°$.

In Exercises 8–10, use the figure.

8. Identify the linear pairs that include $\angle 5$.

9. Are $\angle 3$ and $\angle 5$ vertical angles? Explain your reasoning.

10. Are $\angle 2$ and $\angle 4$ vertical angles? Explain your reasoning.

In Exercises 11–13, Draw a picture, then write and solve an algebraic equation to find the measure of each angle based on the given description.

11. Two angles form a linear pair. The measure of one angle is $24°$ more than the measure of the other angle.

12. The measure of an angle is three times the measurement of its complement.

13. The measure of one angle is 15 less than half the measurement of its supplement.

Answers

1.6 Practice A

1. $\angle FJG$, $\angle GJH$

2. $\angle CAD$, $\angle EJF$

3. $\angle BAC$, $\angle EJG$

4. $54°$

5. $105°$

6. $m\angle WXY = 149°$, $m\angle YXZ = 31°$

7. $m\angle ABC = 48°$, $m\angle CBD = 42°$

8. $\angle 4$ and $\angle 5$

9. yes; The sides form two pairs of opposite rays.

10. no; The sides do not form two pairs of opposite rays.

11. $x + (x + 24) = 180$; $78°$ and $102°$

12. $x + 3x = 90$; $22.5°$ and $67.5°$

13. $x + \left(\frac{1}{2}x - 15\right) = 180$; $50°$ and $130°$