

1-5

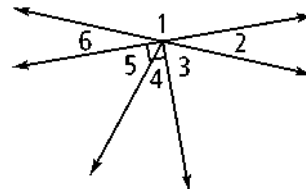
Practice

Form K

Exploring Angle Pairs

Use the diagram at the right. Is each statement true? Explain.

1. $\angle 5$ and $\angle 4$ are supplementary angles.
2. $\angle 6$ and $\angle 5$ are adjacent angles.
3. $\angle 1$ and $\angle 2$ are a linear pair.



Name an angle or angles in the diagram described by each of the following.

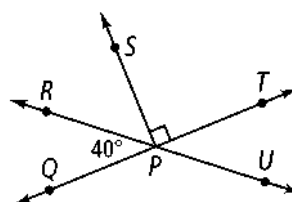
4. a pair of vertical angles
5. supplementary to $\angle RPS$

To start, remember that supplementary angles are two angles whose measures have a sum of .

6. a pair of complementary angles

To start, remember that complementary angles are two angles whose measures have a sum of .

7. adjacent to $\angle TPU$



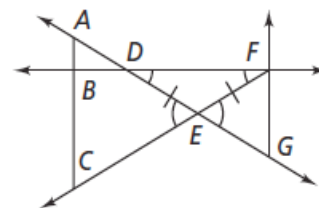
For Exercises 8–11, can you make each conclusion from the information in the diagram? Explain.

8. $\angle CEG \cong \angle FED$

9. $\overline{DE} \cong \overline{EF}$

10. $\angle BCE \cong \angle BAD$

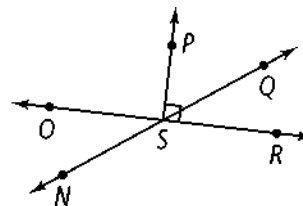
11. $\angle ADB$ and $\angle FDE$ are vertical angles.



Use the diagram at the right for Exercises 12 and 13.

12. Name two pairs of angles that form a linear pair.

13. Name two pairs of angles that are complementary.



1-5

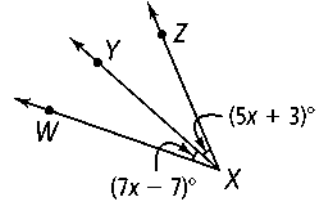
Practice (continued)

Form K

Exploring Angle Pairs

14. **Algebra** In the diagram, \overrightarrow{XY} bisects $\angle WXZ$.

a. Solve for x and find $m\angle WXY$.



b. Find $m\angle YXZ$.

c. Find $m\angle WXZ$.

Algebra \overrightarrow{QR} bisects $\angle PQS$. Draw & label a diagram then solve for x and find $m\angle PQS$.

15. $m\angle PQR = 3x$, $m\angle RQS = 4x - 9$

16. $m\angle PQS = 4x - 6$, $m\angle PQR = x + 11$

17. $m\angle PQR = 5x - 4$, $m\angle SQR = 3x + 10$

18. $m\angle PQR = 8x + 1$, $m\angle SQR = 6x + 7$

Algebra Find the measure of each angle in the angle pair described.

19. The measure of one angle is 5 times the measure of its complement.

20. The measure of an angle is 30 less than twice its supplement.

**In the diagram at the right, $m\angle HKI = 48$.
Find each of the following.**

21. $m\angle HKJ$

22. $m\angle IKJ$

23. $m\angle FKG$

24. $m\angle FKH$

25. $m\angle FKJ$

26. $m\angle GKI$

