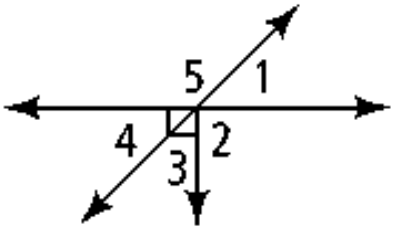
BECA / Huson / Geometry 10th Grade Name:
Unit 1: Tools of Geometry

1b-3 Homework: Angle Pairs

**Use the diagram below. Is each statement true?**

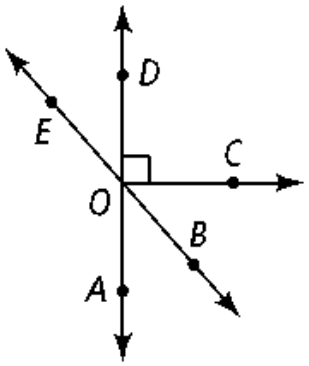
**1.** $\angle 2$ and $\angle 5$ are adjacent angles.




**2.** $\angle 1$ and $\angle 4$ are vertical angles.

**3.** $\angle 4$ and $\angle 5$ are complementary.

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

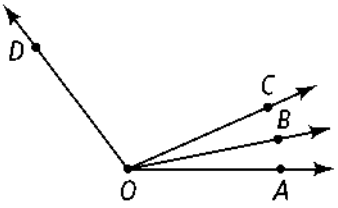



**4.** complementary to $\angle BOC$

**5.** supplementary to $\angle DOB$

**6.** adjacent and supplementary to $\angle AOC$

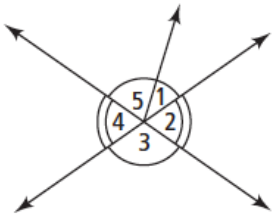
**Use the diagram below for Exercise 7. Solve for *x*. Find the angle measures.**




**7.** $m\angle COD = 8x + 13$; $m\angle BOC = 3x - 10$; $m\angle BOD = 12x - 6$

**8.** $\angle ABC$ and $\angle EBF$ are a pair of vertical angles; $m\angle ABC = 3x + 8$ and $m\angle EBF = 2x + 48$. What are $m\angle ABC$ and $m\angle EBF$?

**For Exercises 9–12, can you make each conclusion from the information in the diagram? Explain.**




**9.** $\angle 3 \cong \angle 4$

**10.** $\angle 2 \cong \angle 4$

**11.** $m\angle 1 + m\angle 5 = m\angle 3$

**12.** $m\angle 3 = 90$

$\overrightarrow{QS}$ **bisects** $\angle PQR$. **Solve for** $x$ **and find** $m\angle PQR$.

**13.** $m\angle PQS = 3x$; $m\angle SQR = 5x - 20$