Name:

# **Complementary and Supplementary Angles**

### **Complementary Angles**



**Practice Problems:** solve for the missing complementary angle, *x*.

 $\angle 45 + \angle x = 90$ ,  $\angle x = 45$   $\angle x + \angle 32 = 90$ ,  $\angle x = 58$   $\angle 80 + \angle x = 90$ ,  $\angle x = 10$ 

## **Supplementary Angles**



Two angles are supplementary if they add up to 180 degrees.

If  $\angle a + \angle b = 180$ °; then  $\angle a$  and  $\angle b$  are supplementary angles.

#### **Examples:**

- 150° and 30° angles are supplementary angles

▶ - 80° and 100° angles are supplementary angles

- 70° and 90° angles are not supplementary angles

**Practice Problems:** solve for the missing supplementary angle, *x*.

 $\angle x + \angle 75 = 180$ ,  $\angle x = 105$   $\angle x + \angle 50 = 180$ ,  $\angle x = 130$   $\angle x + \angle 45 = 180$ ,  $\angle x = 135$ 

### Determine whether $\angle a$ and $\angle b$ are complementary or supplementary.

 $\angle a = 50, \angle b = 40 \text{ complementary}$   $\angle a = 35, \angle b = 145 \text{ supplementary}$   $\angle a = 20, \angle b = 70 \text{ complementary}$   $\angle a = 65, \angle b = 115 \text{ supplementary}$   $\angle a = 65, \angle b = 25 \text{ complementary}$