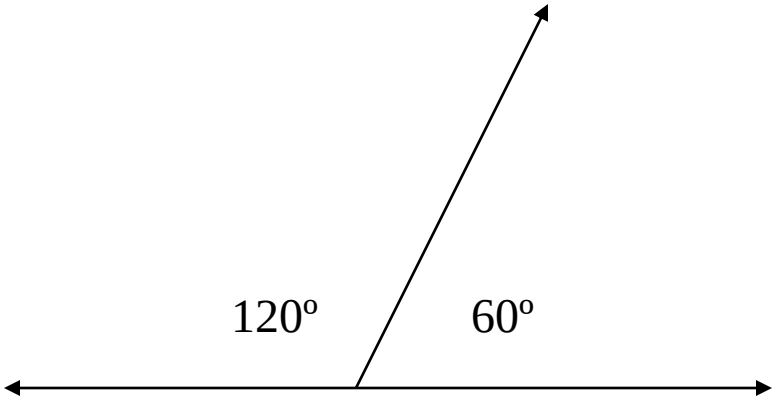
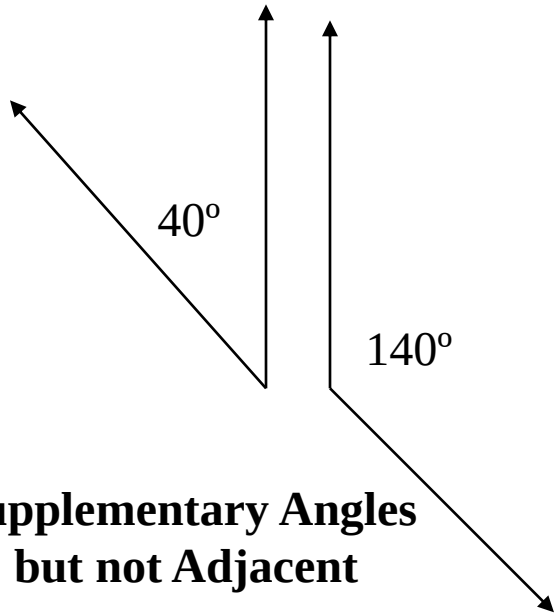
Angle Relationships

Supplementary angles add up to **180º**

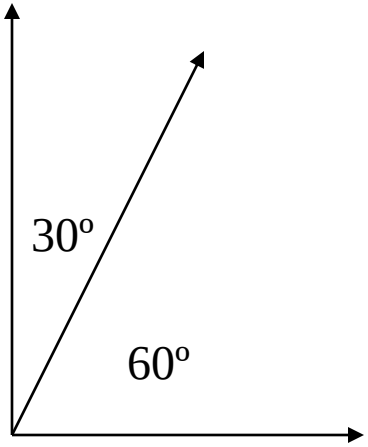


Adjacent and Supplementary Angles

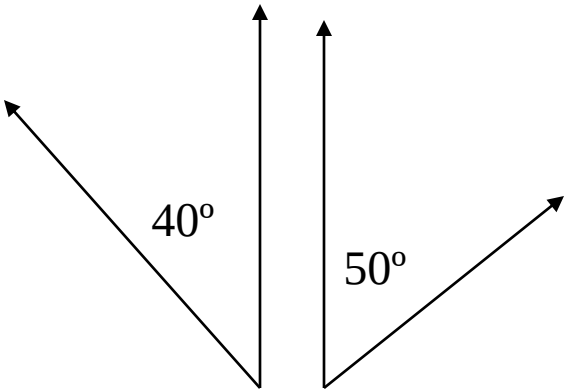


Supplementary Angles but not Adjacent

Complementary angles add up to 90º



Adjacent and Complementary Angles

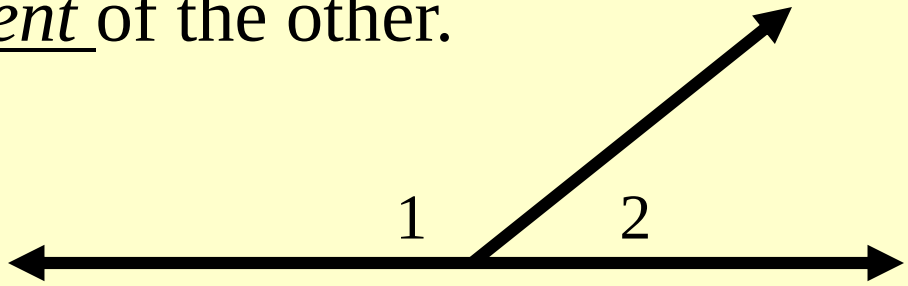


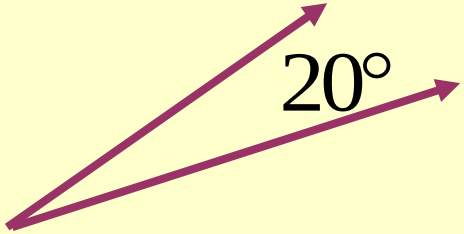
Complementary Angles but not Adjacent

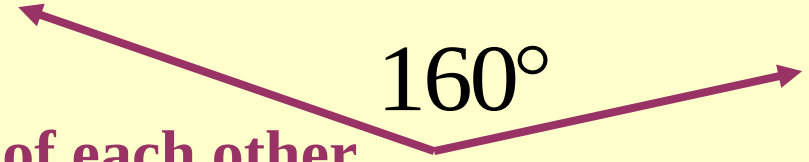
Supplementary Angles

Remember: Two angles are supplementary if the **sum** of their measures is **180 degrees**.

Each angle is the *supplement* of the other.







These are supplements of each other because their angles add up to 180.

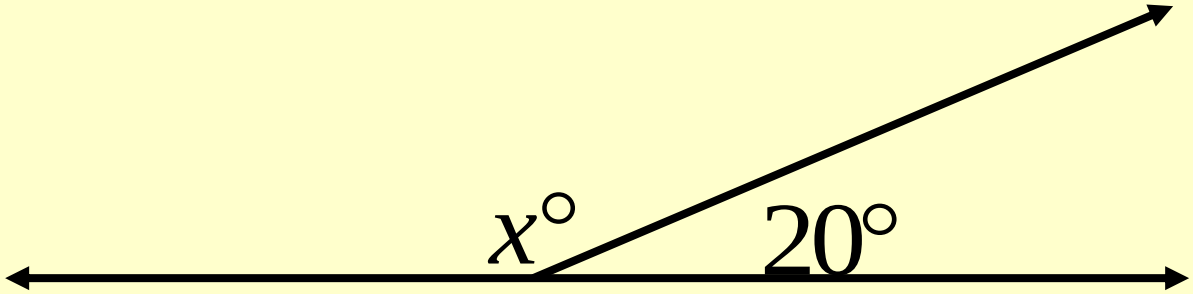
3 STEPS for Finding Missing Angles:

1. First, create an addition equation by adding both angles.

2. The sum of the two angles will **equal**
   90° for Complementary Angles and
   180° for Supplementary Angles.

3. Solve the equation using the inverse operation rules!

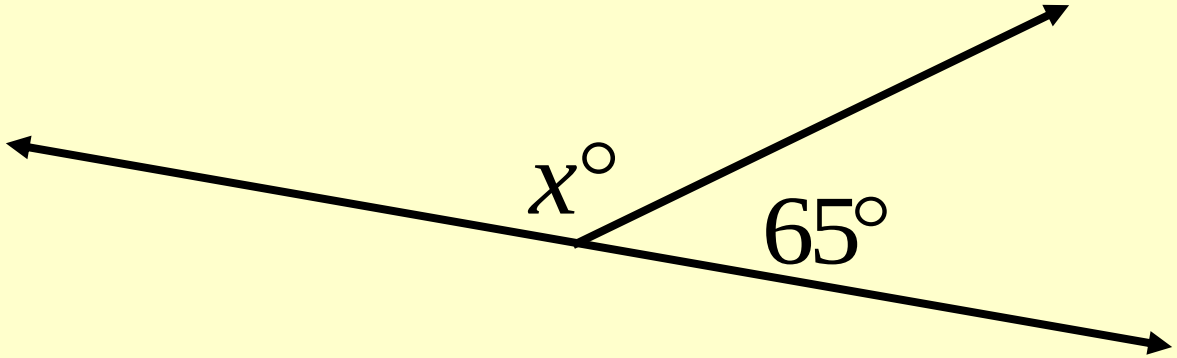
Example 1 **Find the value of *x* by making an equation.**



$$x° + 20° = 180°$$

$$x° = 160°$$

Example 2 **Find the value of x by writing your equation.**

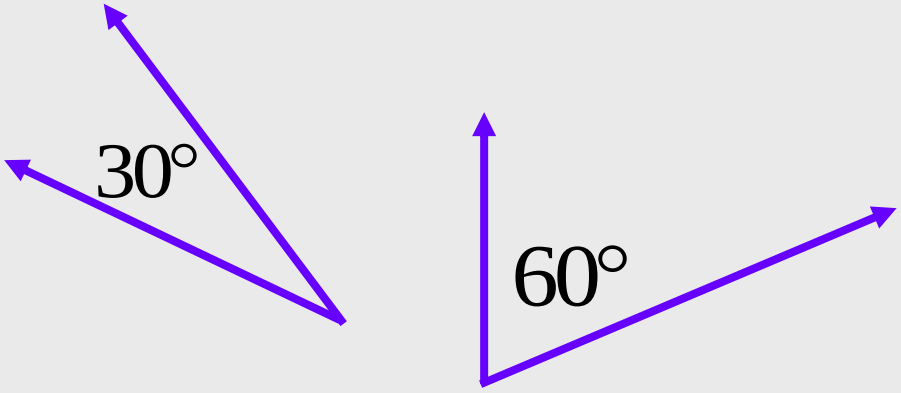


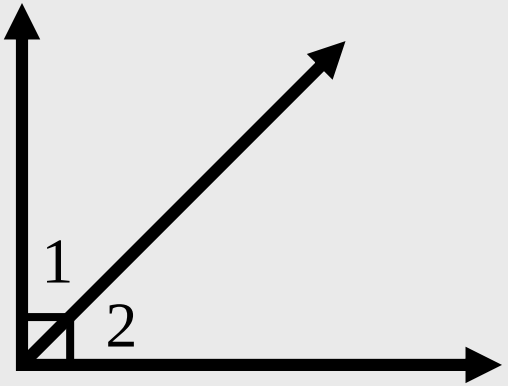
$$x° + 65° = 180°$$

$$x° = 115°$$

Complementary Angles

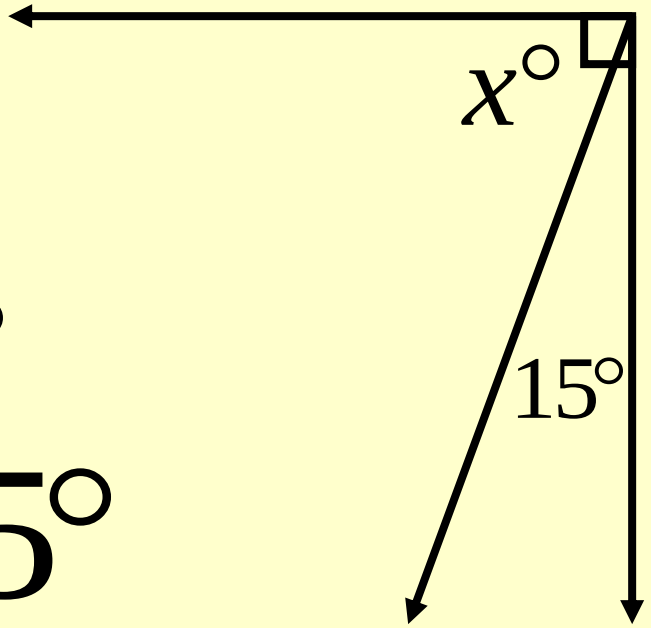
Two angles are complementary if the **sum** of their measures is **90 degrees**. Each angle is the *complement* of the other.





These are complements of each other because their angles add up to be 90.

Example 3 **Find the value of x.**



$$x° + 15° = 90°$$

$$x = 75°$$