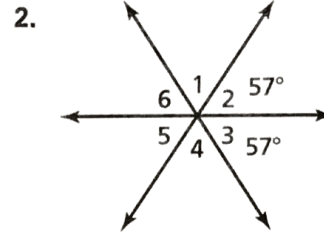
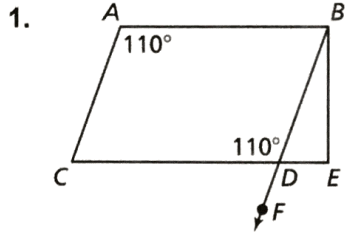


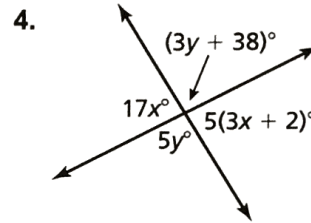
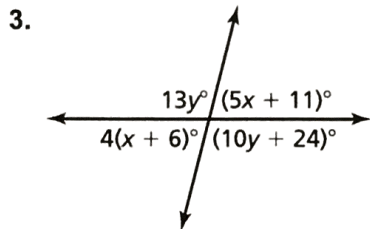
# 2.6

## Practice A

In Exercises 1 and 2, identify the pairs of congruent angles in the figures. Explain how you know they are congruent.



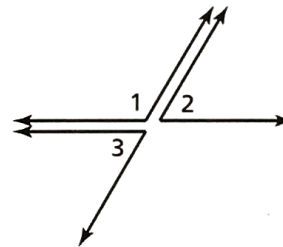
In Exercises 3 and 4, find the values of  $x$  and  $y$ .



5. Copy and complete the two-column proof.

**Given:**  $\angle 1$  and  $\angle 2$  are supplementary.  
 $\angle 1$  and  $\angle 3$  are supplementary.

**Prove:**  $\angle 2 \cong \angle 3$

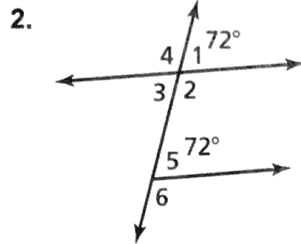
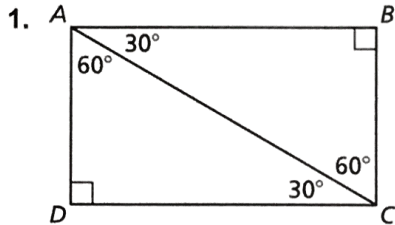


STATEMENTS	REASONS
1. $\angle 1$ and $\angle 2$ are supplementary. $\angle 1$ and $\angle 3$ are supplementary.	1. Given
2. $m\angle 1 + m\angle 2 = 180^\circ$ $m\angle 1 + m\angle 3 = 180^\circ$	2. <u>Definition of Supplementary Angles</u>
3. <u><math>m\angle 1 + m\angle 2 = m\angle 1 + m\angle 3</math></u>	3. Transitive Property ( <u>Substitution from #2</u> )
4. $m\angle 2 = m\angle 3$	4. <u>Subtraction Property of Equality</u>
5. <u><math>\angle 2 \cong \angle 3</math></u>	5. Definition of congruent angles ( <u>Angle Congruence Postulate</u> )

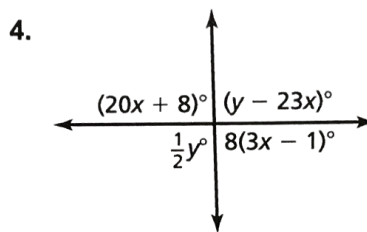
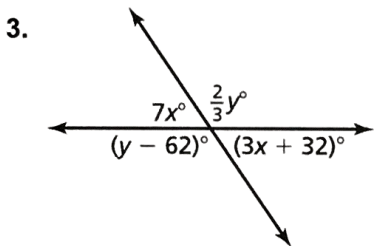
# 2.6

## Practice B

In Exercises 1 and 2, identify the pairs of congruent angles in the figures. Explain how you know they are congruent.

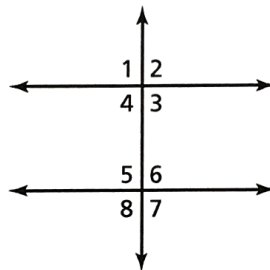


In Exercises 3 and 4, find the values of  $x$  and  $y$ .



5. Copy and complete the flowchart proof.

- Given:**  $\angle 1$  is a right angle.  
 $\angle 5$  is a right angle.  
 $\angle 5$  and  $\angle 8$  are supplementary.



**Prove:**  $\angle 3 \cong \angle 8$

$\angle 1$ is rt. $\angle$	→	$\angle 3$ is rt. $\angle$	→	$\angle 1 \cong \angle 3$	↘	$\angle 3 \cong \angle 8$
Given		Vertical Angles Congruence Theorem (Theorem 2.6)		Right Angle Congruence Theorem (Theorem 2.3)		
$\angle 5$ is rt. $\angle$	→	$\angle 5 = 90^\circ$	↘	$m\angle 8 = 90^\circ$	↗	Right Angle Congruence Theorem (Theorem 2.3)
Given		Definition of a right angle			Definition of a right angle	
$\angle 5$ and $\angle 8$ are supp.	→	$m\angle 5 + m\angle 8 = 180^\circ$	↘	Subtraction Property of Equality		
Given		Definition of supplementary angles				