

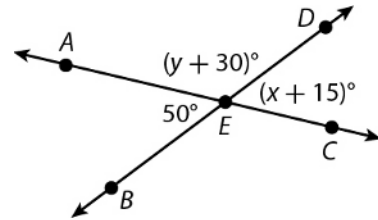
**LESSON**  
**4-1**

# Angles Formed by Intersecting Lines

## Practice and Problem Solving: A/B

- $\angle PQR$  and  $\angle SQR$  form a linear pair. Find the sum of their measures. \_\_\_\_\_
- Name the ray that  $\angle PQR$  and  $\angle SQR$  share. \_\_\_\_\_

Use the figures for Problems 3–8.



- supplement of  $\angle AEB$
- complement of  $\angle AEB$
- $x =$  \_\_\_\_\_
- $y =$  \_\_\_\_\_
- $m\angle DEC =$  \_\_\_\_\_
- $m\angle AED =$  \_\_\_\_\_
- $\angle DEF$  and  $\angle FEG$  are complementary.  $m\angle DEF = (3x - 4)^\circ$ , and  $m\angle FEG = (5x + 6)^\circ$ .

Find the measures of both angles. \_\_\_\_\_

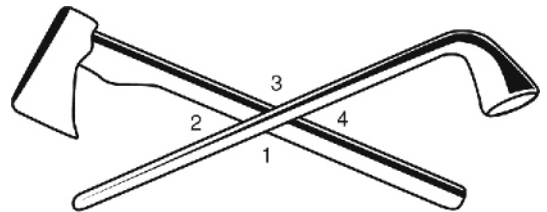
- $\angle DEF$  and  $\angle FEG$  are supplementary.  $m\angle DEF = (9x + 1)^\circ$ , and  $m\angle FEG = (8x + 9)^\circ$ .

Find the measures of both angles. \_\_\_\_\_

Use the figure for Problems 11 and 12.

In 2004, several nickels were minted to commemorate the Louisiana Purchase and Lewis and Clark's expedition into the American West. One nickel shows a pipe and a hatchet crossed to symbolize peace between the American government and Native American tribes.

- Name a pair of vertical angles.  
\_\_\_\_\_  
\_\_\_\_\_



- Name a linear pair of angles.  
\_\_\_\_\_

- $\angle ABC$  and  $\angle CBD$  form a linear pair and have equal measures. Tell if  $\angle ABC$  is acute, right, or obtuse. \_\_\_\_\_

- $\angle KLM$  and  $\angle MLN$  are complementary.  $\overline{LM}$  bisects  $\angle KLN$ . Find the measures of  $\angle KLM$  and  $\angle MLN$ . \_\_\_\_\_

## UNIT 2 Lines, Angles and Triangles

### MODULE 4 Lines and Angles

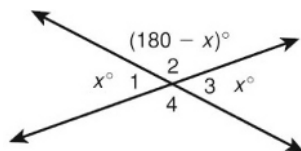
#### LESSON 4-1

##### Practice and Problem Solving: A/B

- $180^\circ$
- $\overline{QR}$
- $130^\circ$
- $40^\circ$
- 35
- 100
- $50^\circ$
- $130^\circ$
- $m\angle DEF = 29^\circ$ ;  $m\angle FEG = 61^\circ$
- $m\angle DEF = 91^\circ$ ;  $m\angle FEG = 89^\circ$
- Possible answers:  $\angle 1$  and  $\angle 3$  or  $\angle 2$  and  $\angle 4$
- Possible answers:  $\angle 1$  and  $\angle 2$ ;  $\angle 2$  and  $\angle 3$ ;  $\angle 3$  and  $\angle 4$ ; or  $\angle 1$  and  $\angle 4$
- right
- $45^\circ$ ;  $45^\circ$

##### Practice and Problem Solving: C

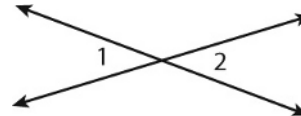
1–3. Possible answer:



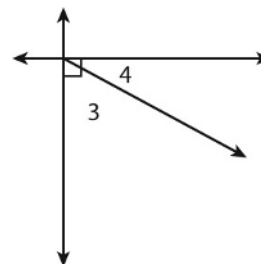
- The measures of the vertical angles are equal.
- a.  $\angle 1 \cong \angle 2$   
b.  $m\angle 1 = m\angle 2$   
c.  $\angle 2$  and  $\angle 4$  are compl.  
d. Given  
e.  $m\angle 2 + m\angle 4 = 90^\circ$   
f. Defn. Comp.  $\angle s$   
g.  $m\angle 1 + m\angle 3 = m\angle 2 + m\angle 4$

##### Practice and Problem Solving: Modified

- complementary angles
- vertical angles
- supplementary angles; linear pair
- right angle
- $90^\circ$
- $20^\circ$
- $40^\circ$ ;  $140^\circ$
- $120^\circ$
- $30^\circ$
- Possible answer:



- Possible answer:



##### Reading Strategies

- complementary
- vertical
- supplementary
- linear, adjacent, or supplementary
- adjacent
- complementary

##### Success for English Learners

- complementary
- $103.7^\circ$

#### LESSON 4-2

##### Practice and Problem Solving: A/B

- $47^\circ$
- $119^\circ$
- $97^\circ$