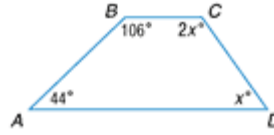


## Lesson 10-4

**Example 1 Find Angle Measures**  
**ALGEBRA** Find the value of  $x$ . Then find each missing angle measure.



**Words** The sum of the measures of the angles is  $360^\circ$ .

**Variables** Let  $m\angle A$ ,  $m\angle B$ ,  $m\angle C$ , and  $m\angle D$  represent the measures of the angles.

**Equation**

$$\begin{aligned} m\angle A + m\angle B + m\angle C + m\angle D &= 360 && \text{Angles of a quadrilateral} \\ 44 + 106 + 2x + x &= 360 && \text{Substitution.} \\ 3x + 150 &= 360 && \text{Combine like terms.} \\ 3x + 150 - 150 &= 360 - 150 && \text{Subtract 150 from each side.} \\ 3x &= 210 && \text{Simplify.} \\ x &= 70 && \text{Divide each side by 3.} \end{aligned}$$

The value of  $x$  is 70. So,  $m\angle D = 70^\circ$  and  $m\angle C = 140^\circ$ .

**Example 2 Classify Quadrilaterals**

Classify each quadrilateral using the name that *best* describes it.

a.



The quadrilateral has opposite sides parallel and opposite sides congruent. It is a parallelogram.

b.



The quadrilateral has opposite sides parallel. It is a trapezoid.

c. **QUILT** Classify the quadrilaterals that are sewn in the quilt at the right.

Each of the quadrilaterals is a parallelogram with 4 congruent sides. The quadrilaterals are rhombi.

