Angle Relationships in Quadrilaterals
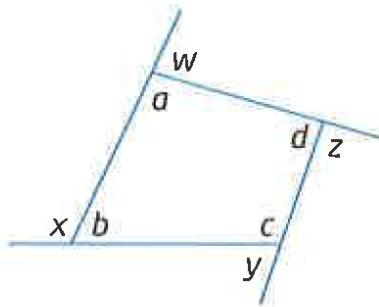
The sum of the **interior** angles of a quadrilateral is 360 degrees.

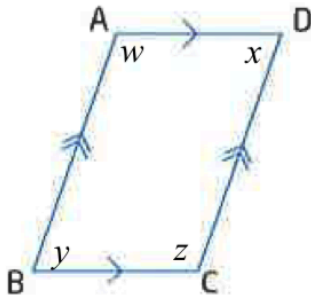The sum of the **exterior** angles of a quadrilateral is also 360 degrees.

Interior angles:
$a + b + c + d = 360°$

Exterior angles:
$w + x + y + z = 360°$

Angle Relationships in Parallelograms

Adjacent angles in a parallelogram are supplementary (add to 180).

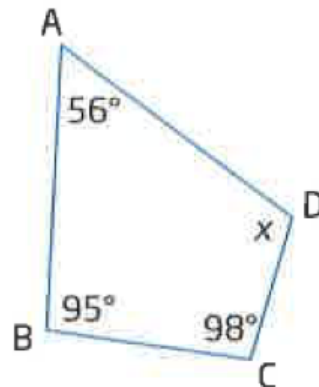**Opposite** angles in a parallelogram are equal.

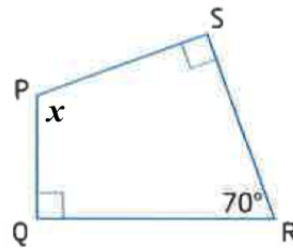| Adjacent angles:	Opposite angles:
$w + x = 180$	$w = z$
$w + y = 180$	$x = y$
$y + z = 180$	
$z + x = 180$	

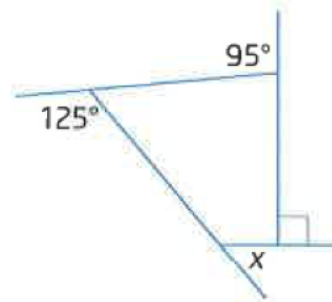**Example 1:** Find the measure of the unknown angle

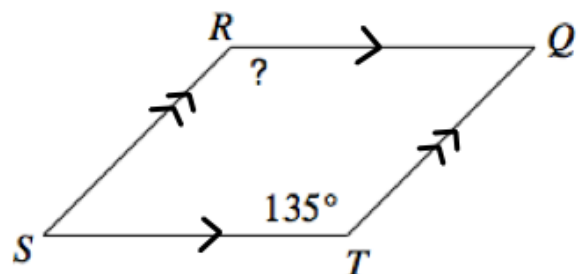**Example 2:** Find the measure of the unknown angle
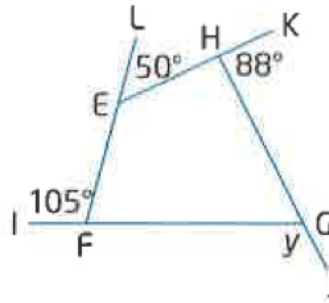
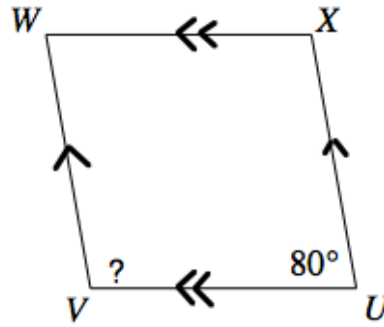**Example 3:** Find the measure of the unknown angle

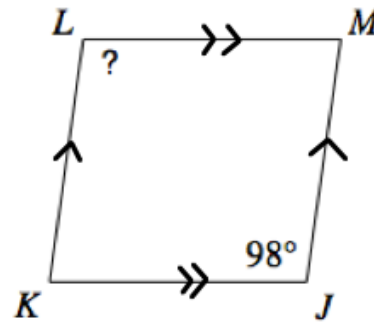**Example 4:** Find the measure of the unknown angle

Example 5: Find the measure of the unknown angle

Example 6: Find the measure of the unknown angle

$$W \quad X$$

?

80°

Example 7: Find the measure of the unknown angle

?

98°

Example 8: Find the measure of the unknown angle

?

70°