Chapter 3 - Triangle Properties
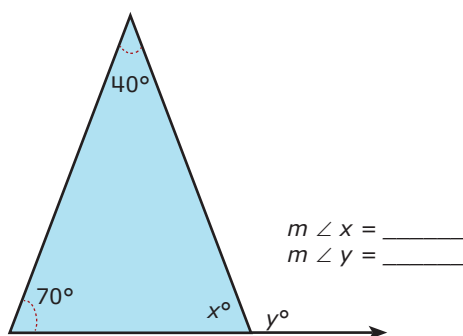
Sum of Angle Measures

In any triangle, the sum of the angle measures is 180° as you learned in the previous chapter.
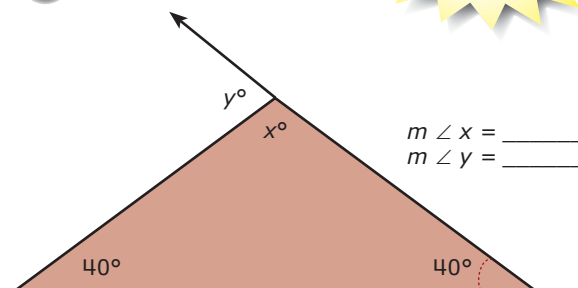
Find the **measure** of the missing x angle in these triangles. Try to discover how the exterior y angle is related to two of the interior angles of the triangle. Write your answers in each drawing.
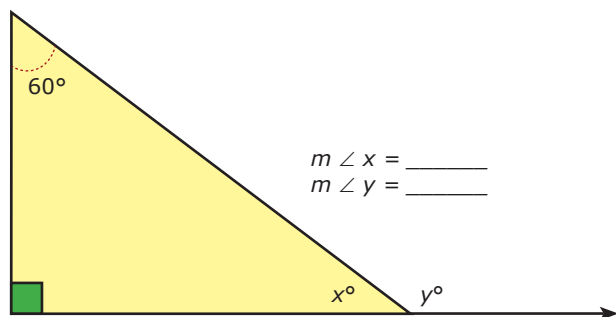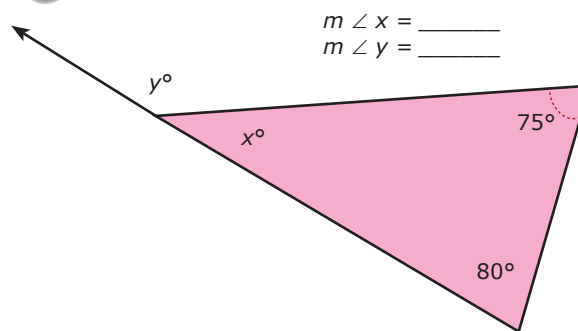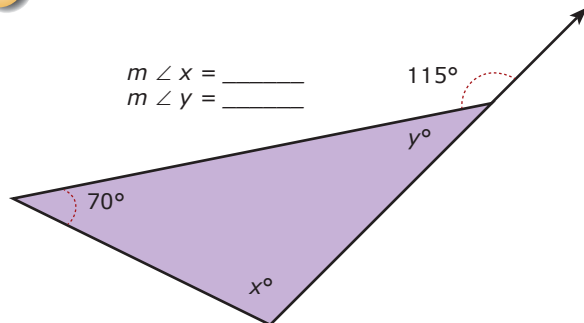
Reminder
Figures are **not** to scale.

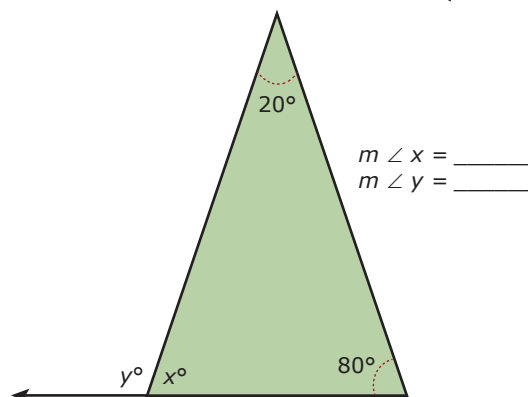**1**

40°

70°

$x°$ $y°$

$m \angle x =$ _____
$m \angle y =$ _____

2

$y°$

$x°$

40°   40°

$m \angle x =$ _____
$m \angle y =$ _____

3

60°

$x°$ $y°$

$m \angle x =$ _____
$m \angle y =$ _____

4

$m \angle x =$ _____
$m \angle y =$ _____

$y°$

$x°$

75°

80°

5

$m \angle x =$ _____
$m \angle y =$ _____

115°

$y°$

70°

$x°$

6

20°

$m \angle x =$ _____
$m \angle y =$ _____

$y°$ $x°$ 80°

7   What do you discover? Explain your thinking.