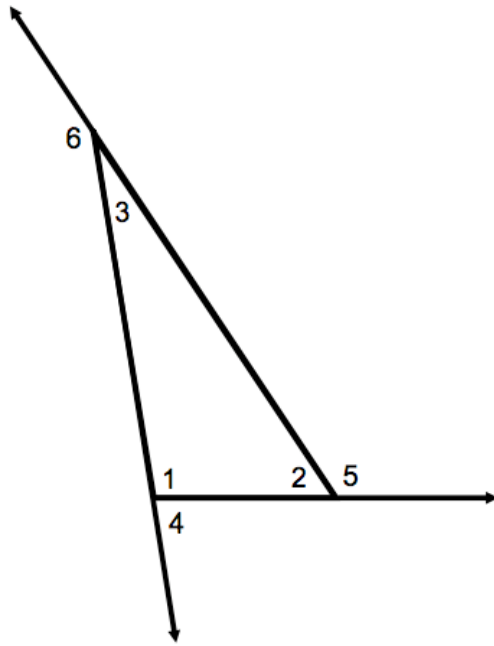# 9.2 – The Exterior Angles of a Triangle
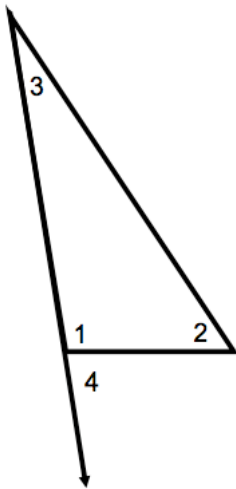
Interior vs Exterior Angles
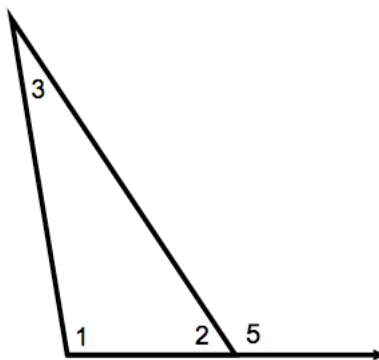
List the interior angles of the triangle:

List the exterior angles of the triangle:
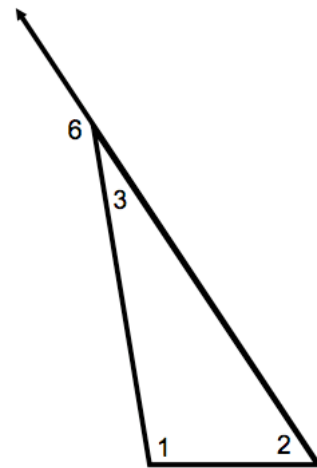
What is an exterior angle equal to?
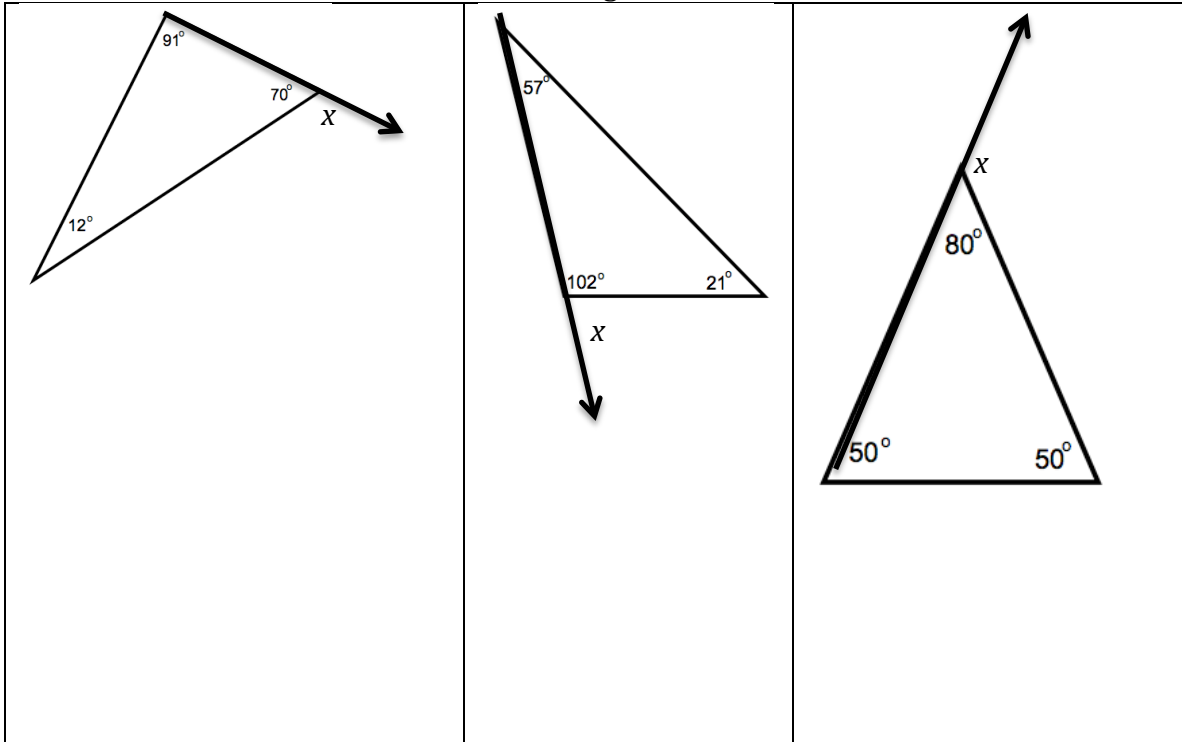
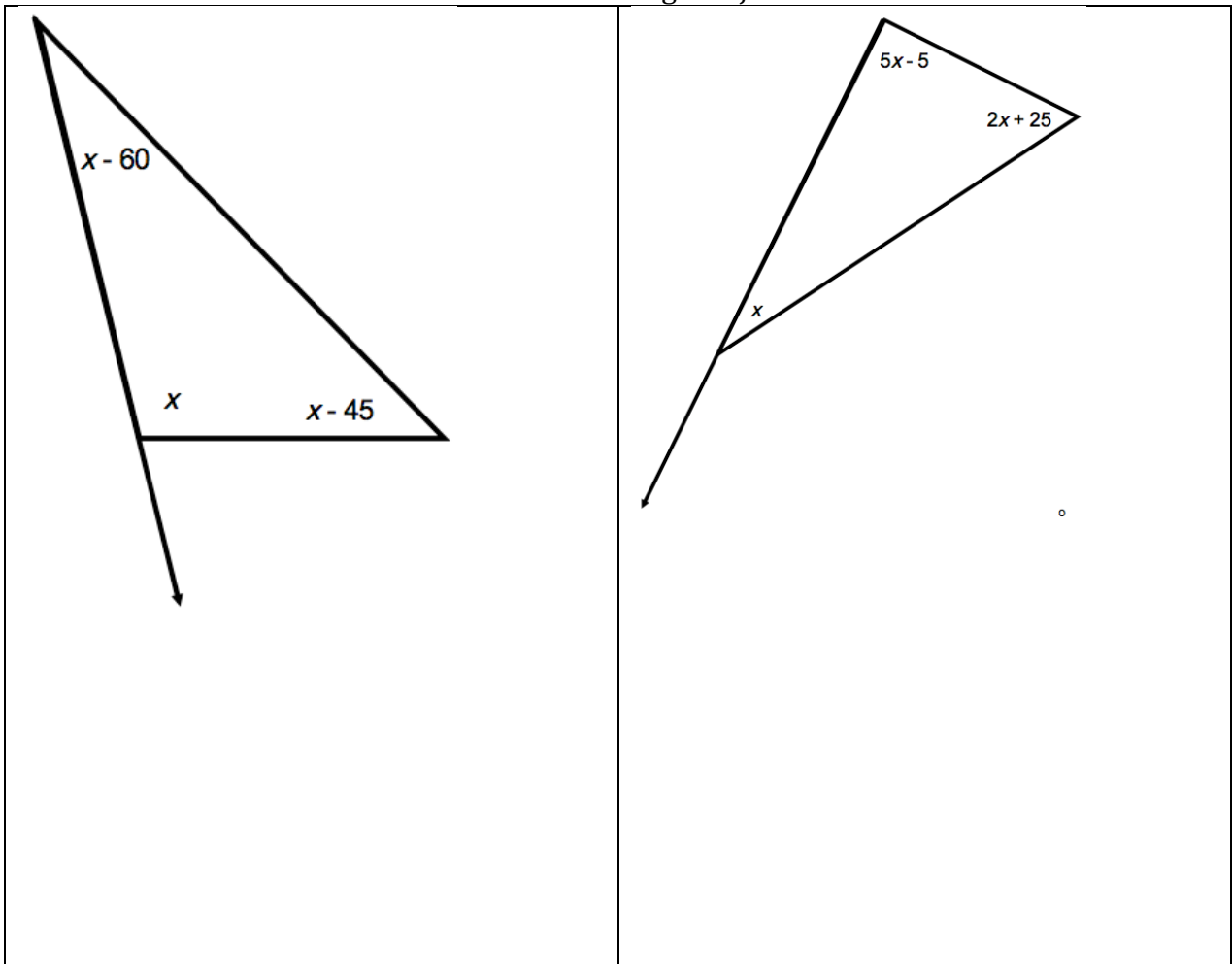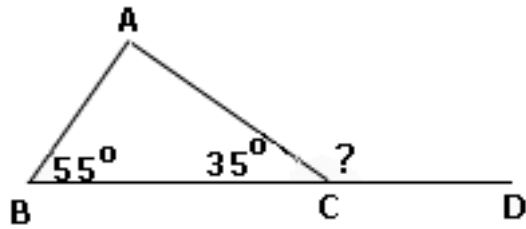$m\angle 4 =$ $m\angle 5 =$ $m\angle 6 =$
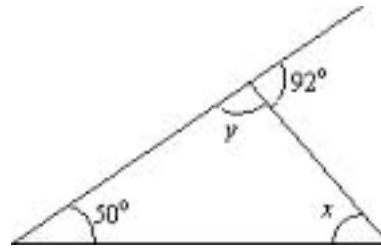
LP#1 – Find the measure of the exterior angle *x*.

91° 70° *x* 12°

57° 102° 21° *x*

x 80° 50° 50°

LP#2 - Determine the measure of the exterior angle adjacent to *x*.

x - 60 *x* *x* - 45

5*x* - 5 2*x* + 25 *x*

Lesson 9.2

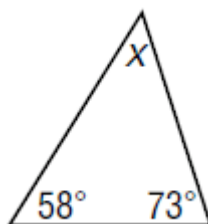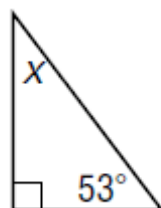|	
R#1 – Find the measure of the exterior angle.	Determine the measure for *x* and *y*.
R#2 Determine the measure for ∠1 and ∠2 .	Determine the measure for *x* and *y*.
R#3 Determine the measure for *x* and *y*.	Determine the measure for *x, y,* and *z*.
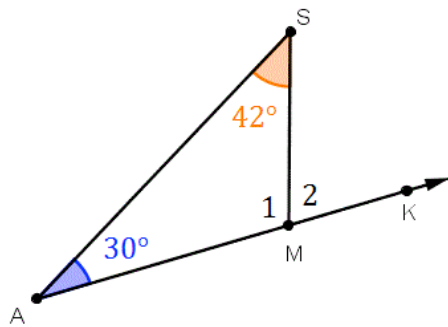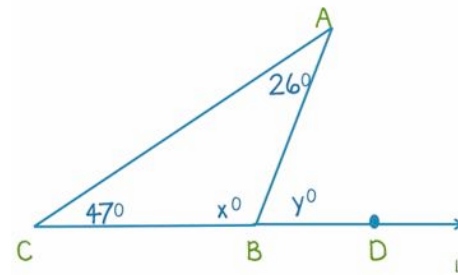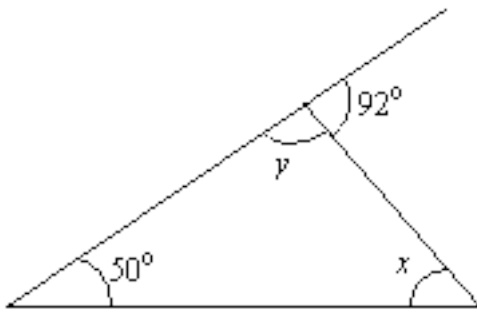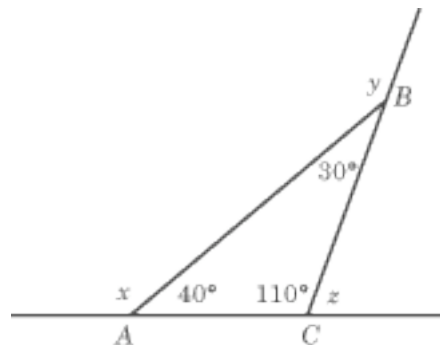
Homework
Directions – a) Draw an exterior angle adjacent to angle *x*. **b)** Determine the measure of the exterior angle adjacent to *x*.
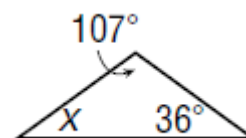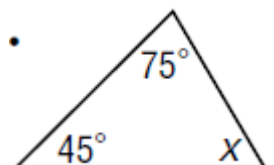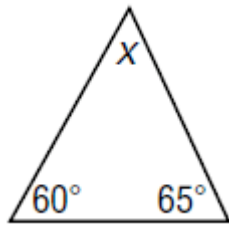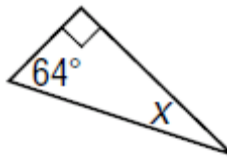
1.   **2.**   **3.**   **4.**

Lesson 9.2

5.

Triangle with angles $60°$, $65°$, and x.

6.

Triangle with a right angle, $64°$, and x.

7.

Triangle with a right angle, $45°$, and x.

8.

Triangle with $61°$, a right angle, and x.

9.

Triangle with x, $112°$, and $28°$ exterior angle.

10.

Triangle with $48°$, $84°$, and x.
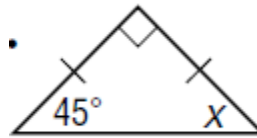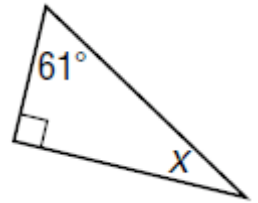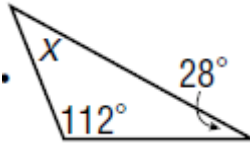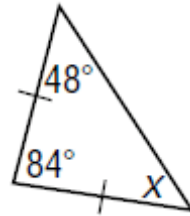
Directions - For #11-15, solve for *x*.

11.

Triangle with angles $8x$, $5x + 40$, and x.

12.

Triangle with angles x, $x + 50$, and $3x - 70$.

13.

Triangle with angles $3x + 50$, x, and x.

14.

$(5x +13)°$, $(4x+ 2)°$, $(2x -9)°$

15.

$3x-10$, 25, $x+15$

Lesson 9.2