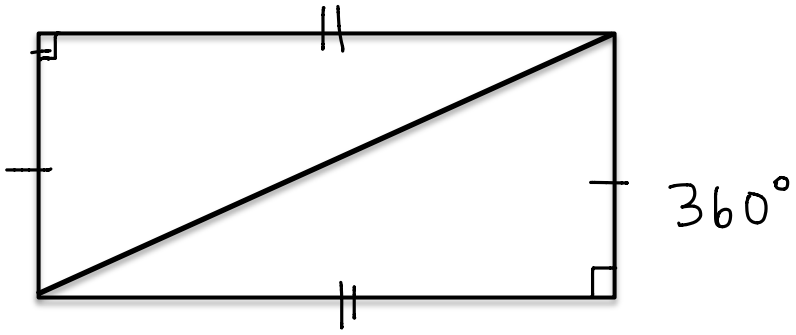
NAME:_____ Math 7.1, Period 1 and 2

Mr. Rogove Date:_____

LEARNING OBJECTIVE: We will use the angle sum theorem to find missing interior and exterior angles of triangles. (Lesson 79)

CONCEPT DEVELOPMENT:

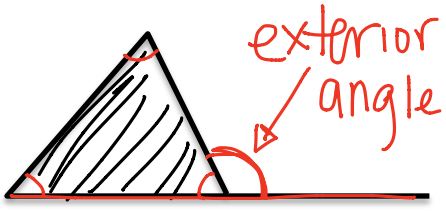
One final informal proof of the Angle Sum Theorem: using a rectangle.

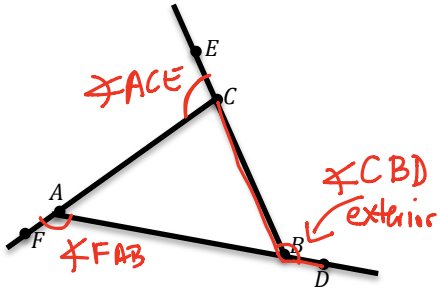


Rectangle cut by a diagonal creates 2 congruent △'s are 180° each.

The exterior angle of a triangle: This is formed when one of the sides of a triangle is extended. The interior angles of a triangle are inside and the **exterior angles are outside along the extended side.**

Examples:





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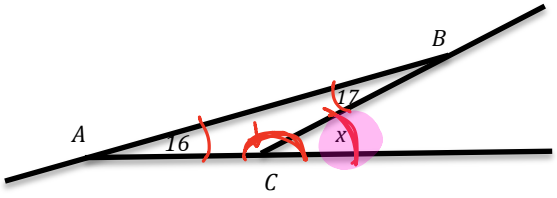
Guided Practice:

Steps for Finding Missing Angle Measures

1. Find the available measures of the angles of your triangle.
2. Use the facts we have learned about triangles (especially that all triangles are 180° or that straight angles are 180°) to help solve for your unknown angle measure.



$16+17+\measuredangle ACB=180$

$33+\measuredangle ACB=180$

$-33 \quad -33$

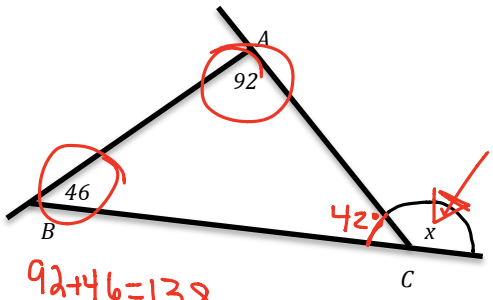
$\measuredangle ACB=147°$

$\measuredangle ACB+\measuredangle X=180$

$147+\measuredangle X=180$

$-147 \quad -147$

$\measuredangle X=33°$



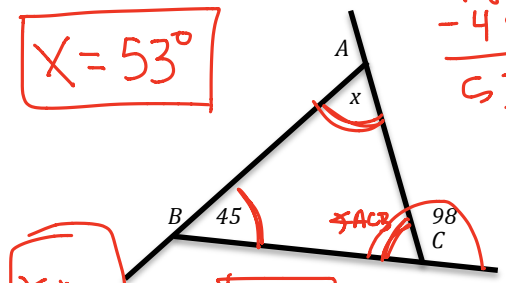
$92+46=138$

$180-138=42$

$\measuredangle X+42=180$

$\measuredangle X=138°$

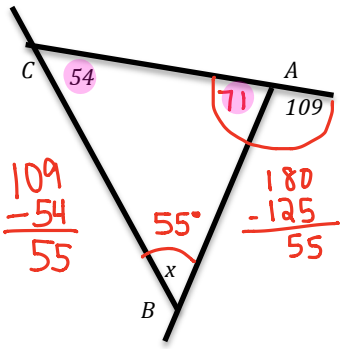
$X=53°$



$98-45=53$

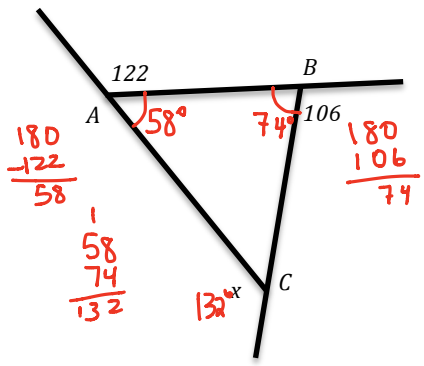
$\measuredangle ACB+98=180°$

$\measuredangle ACB+X+45=180°$



$109-54=55$

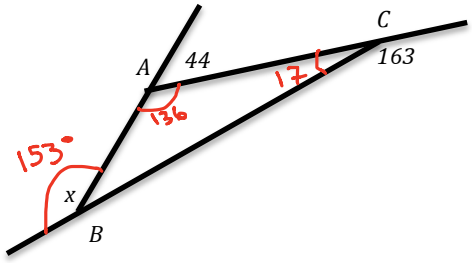
$180-125=55$



$180-122=58$

$180-106=74$

$58+74=132$



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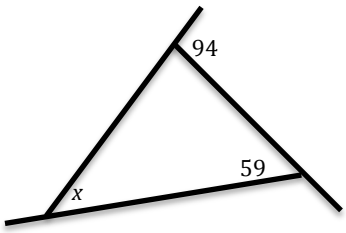
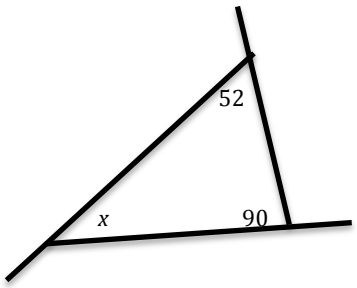
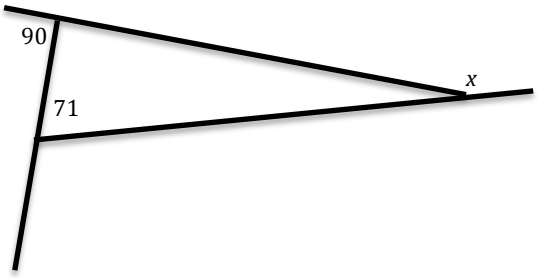
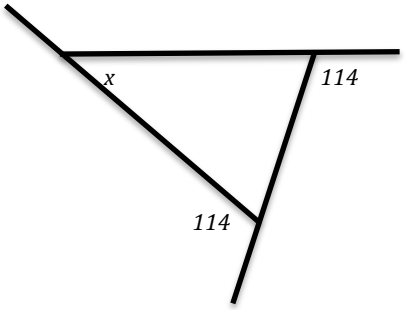
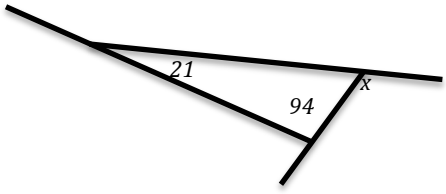
Independent Practice:

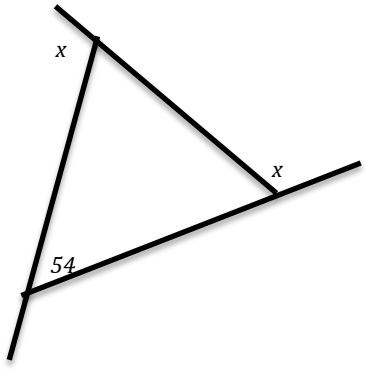












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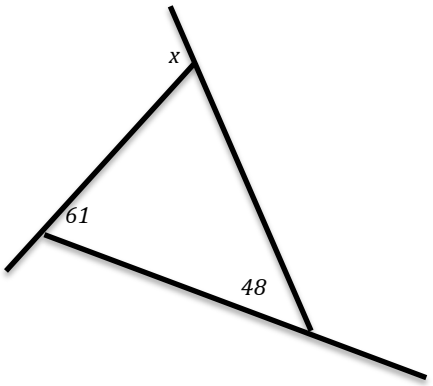

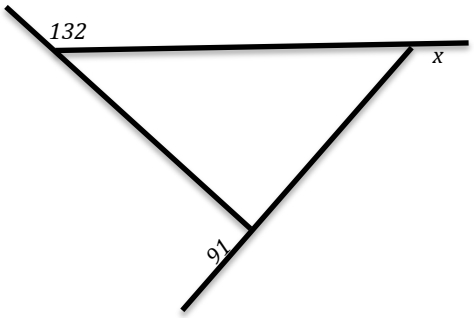

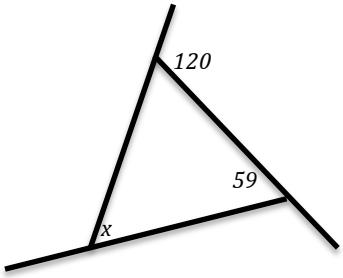

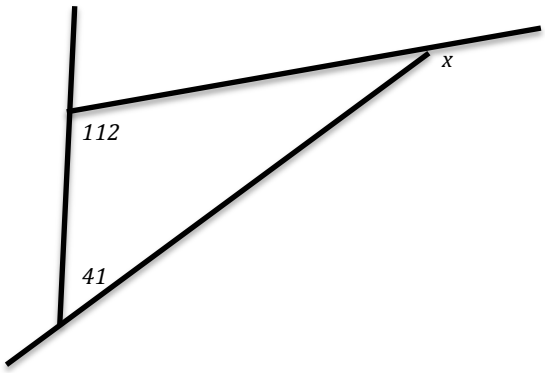

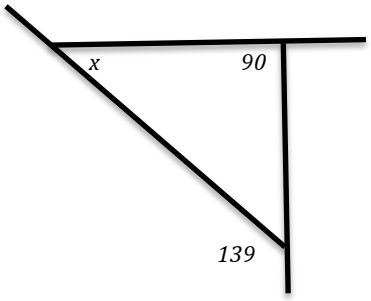

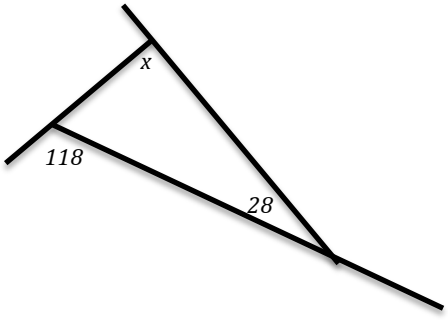

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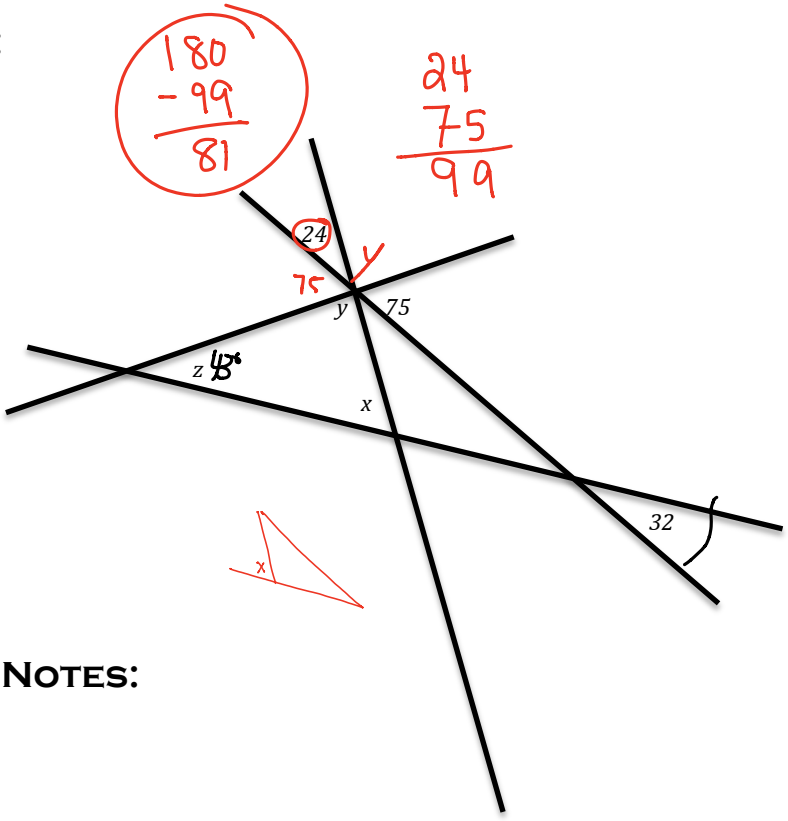
Activating Prior Knowledge:

Closure:



Teacher Notes: