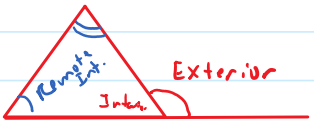
1.3 Triangle Sum Theorem

Wednesday, August 15, 2018 2:46 PM

Triangle Sum Theorem: The sum of the 3 angles of a triangle add up to 180°.

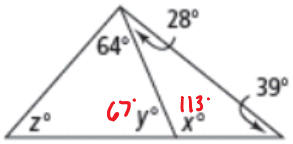
An exterior angle of a triangle is always adjacent to an interior angle of a triangle.

Shortcut: The **sum** of **two remote interior angles** of a triangle is **equal** to the **exterior angle** of a triangle.



[4-6] Find the value of each variable.

4.



$x + 39° + 28° = 180°$

$x + 67 = 180$

$-67 \quad -67$

$x = 113°$

$y = 67°$

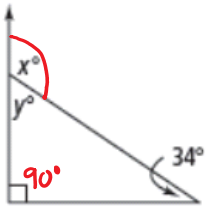
$64 + 67 + z = 180$

$131 + z = 180$

$-131 \quad -131$

$z = 49$

10. What are the values of x and y in the right triangle?



$x = 90° + 34°$

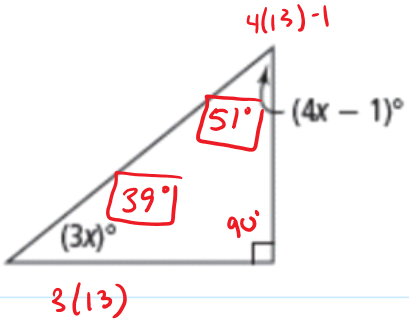
$x = 124°$

$180 - 124$

$y = 56°$

[11-14] Find the values of the variables and the measures of the angles.

11.



$(4x - 1) + (3x) + 90° = 180°$

$7x + 89 = 180$

$-89 \quad -89$

$\frac{7x}{7} = \frac{91}{7}$

$x = 13$