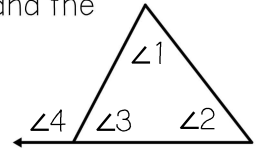


EXTERIOR ANGLES OF TRIANGLES

EXTERIOR ANGLES

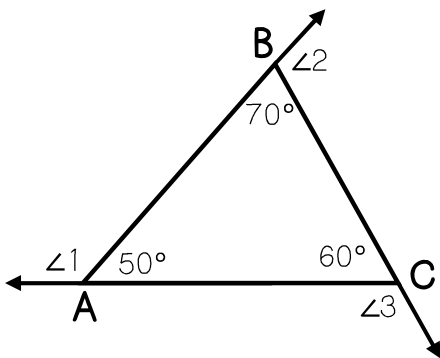
- An exterior angle is formed by one side of a triangle and the _____ of an adjacent side of the triangle.
- In the triangle to the right, _____ is an exterior angle.



REMOTE INTERIOR ANGLES

- Remote interior angles are the two interior angles that are _____ to, or touching, the exterior angle.
- For example, in the picture above, _____ is the exterior angle, and _____ and _____ are the remote interior angles.

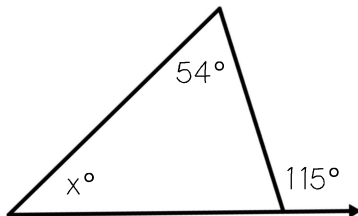
1. Triangle ABC is shown below. Is there enough information to find the measure of the exterior angles? If so, find and label the angle measurements.



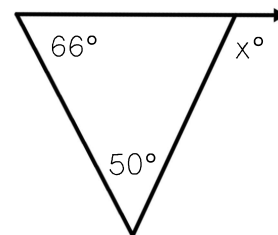
- Find the sum of $\angle BAC$ and $\angle ABC$. Where else do you see this measure?
- Find the sum of $\angle ABC$ and $\angle BCA$. Where else do you see this measure?
- Find the sum of $\angle BAC$ and $\angle BCA$. Where else do you see this measure?

From this example, we can conclude that any exterior angle is equal to the _____ of its two _____ interior angles.

2. Write and solve an equation to find the value of x .

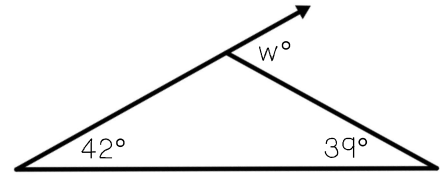


3. Write and solve an equation to find the value of x .



4. Which statement is true about the triangle shown at the right?

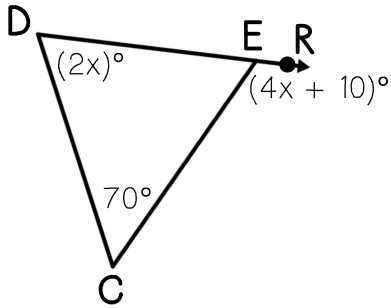
- a. $w = 99^\circ$, because $42 + 39 = 81$ and $180 - 81 = 99$.
- b. $w = 261^\circ$, because $42 + 39 = 81$ and $18 + 81 = 261$.
- c. $w = 81^\circ$, because $180 - (42 + 39) = 99$ and $180 - 99 = 81$.
- d. None of the above



In 5-10, write and solve an equation to find the value of x and the listed angle measure in each triangle. Use the number bank to help you check your solutions. Not all numbers will be used.

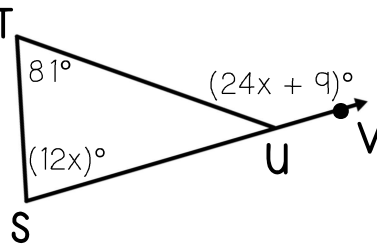
97	-2	-3	17	6	56
115	30	35	72	125	13
	55	130	43	27	8

5.



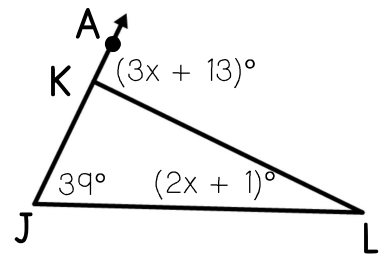
$x =$ _____
 $\angle REC =$ _____

6.



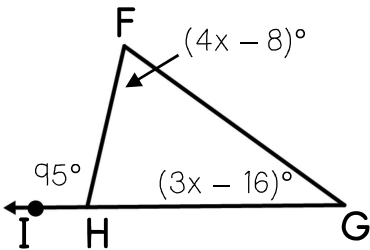
$x =$ _____
 $\angle TSU =$ _____

7.



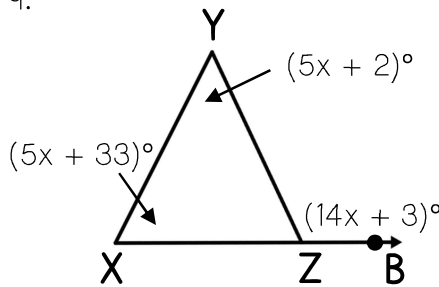
$x =$ _____
 $\angle JLK =$ _____

8.



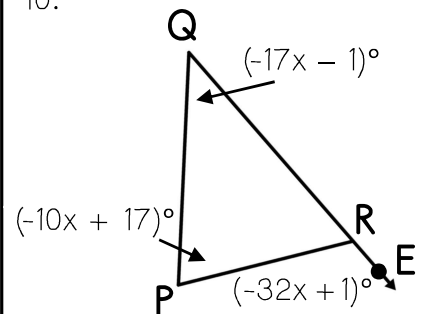
$x =$ _____
 $\angle FGH =$ _____

9.



$x =$ _____
 $\angle BZY =$ _____

10.

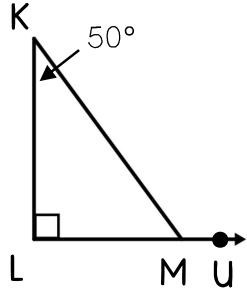
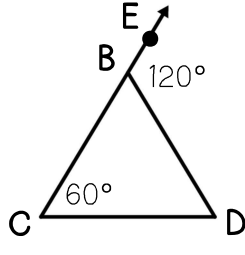
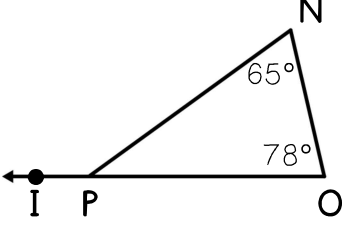
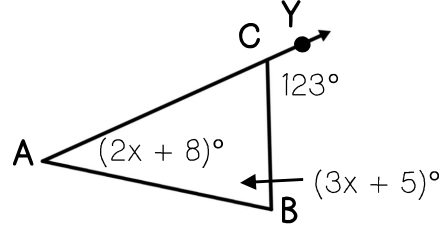
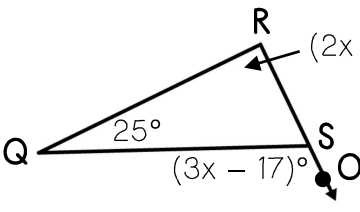
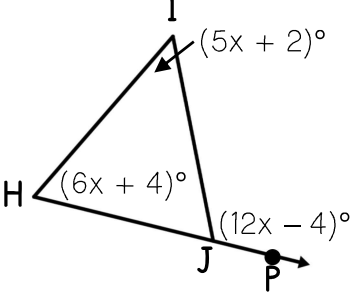
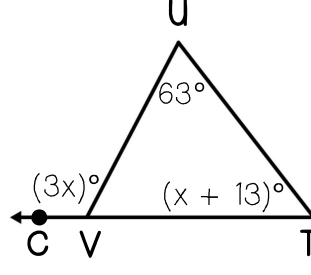
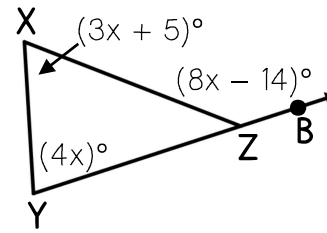
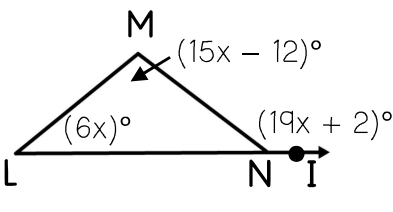


$x =$ _____
 $\angle ERP =$ _____

Summarize today's lesson:

EXTERIOR ANGLES OF TRIANGLES

Answer each question below. Match your answers in the table to solve the riddle.

<p>1 Find the $m\angle KMU$.</p> 	<p>2 Find the $m\angle BDC$.</p> 	<p>3 Find the $m\angle NPI$.</p> 
<p>4 Find the value of x.</p> 	<p>5 Find the value of x.</p> 	<p>6 Find the value of x.</p> 
<p>7 Find the $m\angle CVU$.</p> 	<p>8 Find the $m\angle YXZ$.</p> 	<p>9 Find the $m\angle MNI$.</p> 

G: 140	A: 114	E: 45	O: 52	E: 62	T: 60
C: 22	D: 25	M: 112	L: 143	R: 135	N: 10

WHAT DO YOU CALL A CRUSHED ANGLE?

7 9 8 4 2 7 6 1 3 5