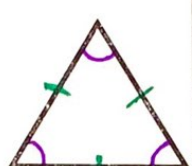
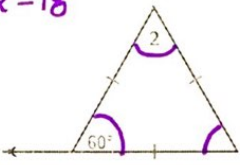
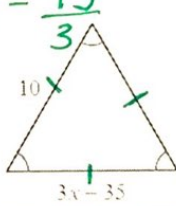

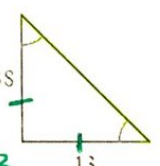
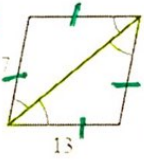
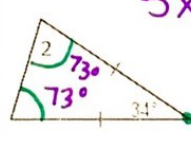
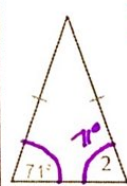
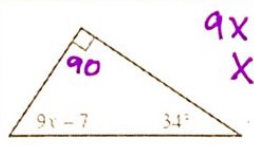
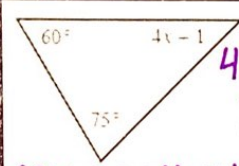


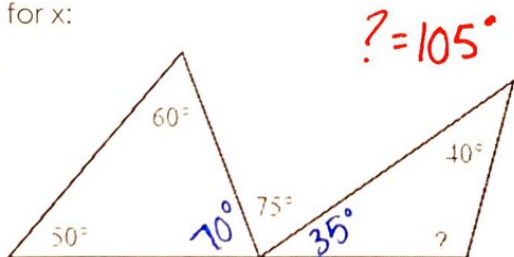
Name: Key Date: _____

Triangles - Angles and Sides

	Definition, Sketch, Unique features	Examples	
Equilateral	<ul style="list-style-type: none"> All three sides are <u>congruent</u> All three angles are <u>congruent</u> The angles in an equilateral triangle will always be <u>60°</u>. 	$2x + 24 = 60$ $\begin{array}{r} -24 \quad -24 \\ \hline 2x = 36 \\ x = 18 \end{array}$ $m\angle 2 = 2x - 24$ 	$3x - 35 = 10$ $\begin{array}{r} +35 \quad +35 \\ \hline 3x = 45 \\ \frac{3x}{3} = \frac{45}{3} \\ x = 15 \end{array}$ 
Isosceles	<ul style="list-style-type: none"> <u>Two</u> sides are congruent. If 2 sides in a triangle are congruent, then the angles <u>opposite</u> them are also <u>congruent</u> If 2 angles in a triangle are congruent, then the sides <u>opposite</u> them are also <u>congruent</u> 	$3x - 38 = 13$ $\begin{array}{r} +38 \quad +38 \\ \hline 3x = 51 \\ x = 17 \end{array}$ 	$2x - 7 = 13$ $\begin{array}{r} +7 \quad +7 \\ \hline 2x = 20 \\ x = 10 \end{array}$ 
		$m\angle 2 = 5x - 7$ $5x - 7 = 73$ $\begin{array}{r} +7 \quad +7 \\ \hline 5x = 80 \\ x = 16 \end{array}$ 	$m\angle 2 = 3x + 14$ $3x + 14 = 71$ $\begin{array}{r} -14 \quad -14 \\ \hline 3x = 57 \\ x = 19 \end{array}$ 
Scalene	<ul style="list-style-type: none"> All THREE sides and all three angles are <u>not congruent</u> 	$9x = 63$ $x = 7$ 	$4x = 44$ $x = 11$ 

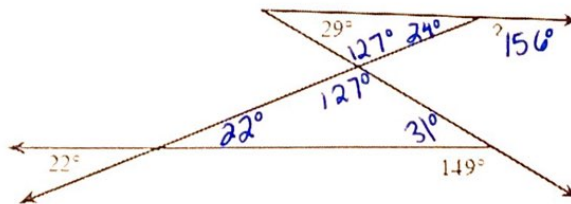
Solve for x:

1.



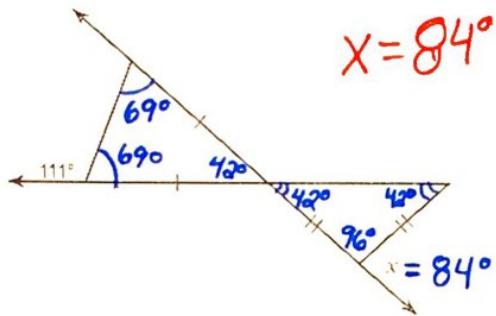
$$117 + 9x = 180$$

2.

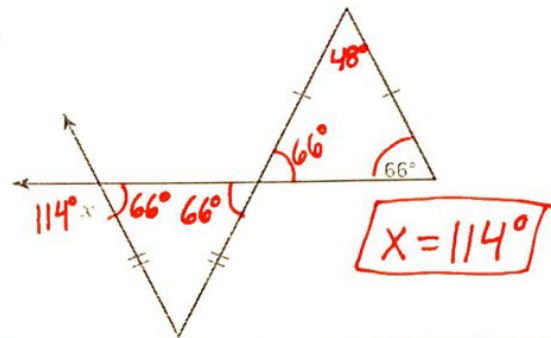


Solve for x:

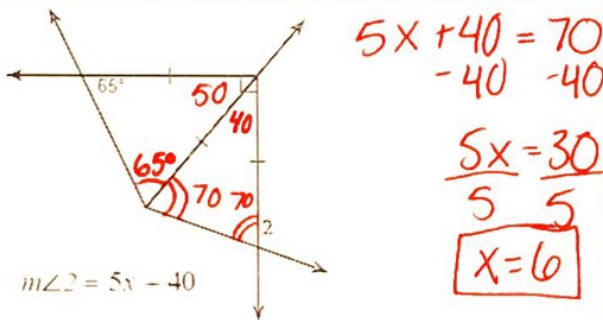
3.



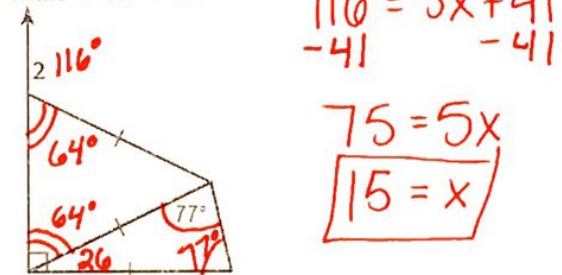
4.



5.

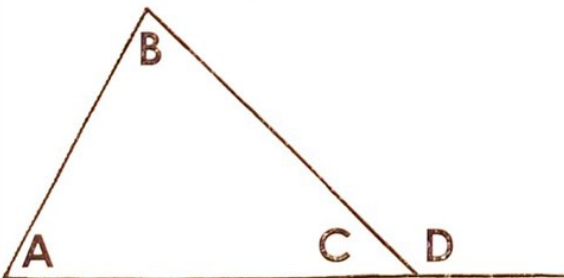


6. $m\angle 2 = 5x + 41$

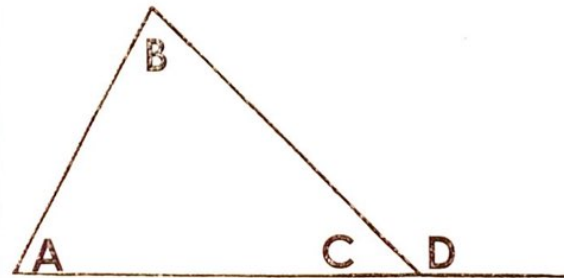


Exterior Angle Theorem

An exterior angle is equal to the sum of the two non-adjacent interior angles.

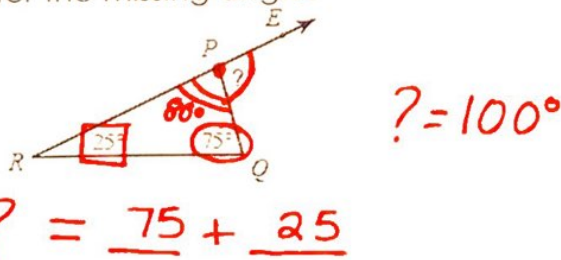


$\angle D = \angle A + \angle B$

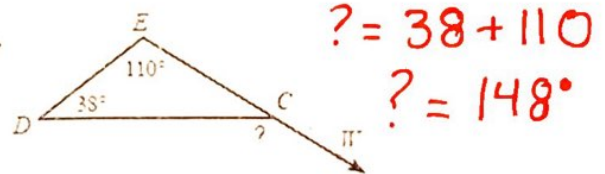


Solve for the missing angle:

7.

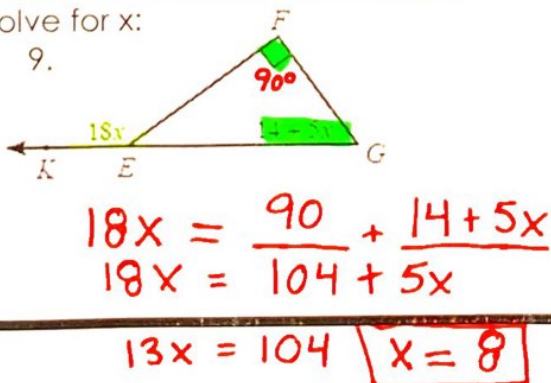


8.



Solve for x:

9.



10.

