



- I can use theorems about isosceles and equilateral triangles to solve problems.

First things first: Some theorems that will help you solve problems in this section.

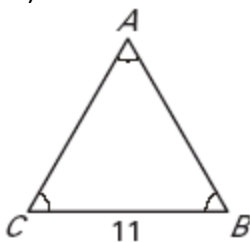
Theorem	Explanation	Picture
Base Angles Theorem	If two sides of a triangle are congruent, then the angles opposite them are congruent.	If $\overline{AB} \cong \overline{AC}$, then _____ \cong _____
Converse of the Base Angles Theorem	If two angles of a triangle are congruent, then the sides opposite them are congruent.	If $\angle B \cong \angle C$, then _____ \cong _____
Corollary of the Base Angles Theorem	If a triangle is equilateral, then it is equiangular.	If $\overline{AB} \cong \overline{BC} \cong \overline{AC}$, then _____ \cong _____ \cong _____
Corollary to the converse of the Base Angles Theorem	If a triangle is equiangular, then it is equilateral.	If $\angle A \cong \angle B \cong \angle C$, then _____ \cong _____ \cong _____

Now let's try some examples:

- 1) In the diagram, $\overline{RT} \cong \overline{ST}$. Please name two congruent angles.

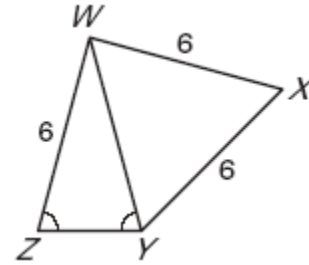


- 2) Find AC and AB in the triangle below.



Use the information in the diagram to find the missing values.

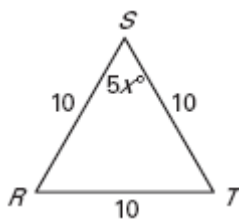
3) Find WY.



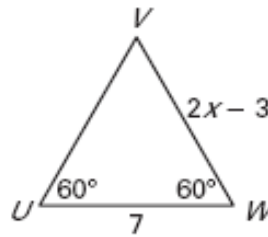
4) Find $m\angle WXY$.

Please solve for x.

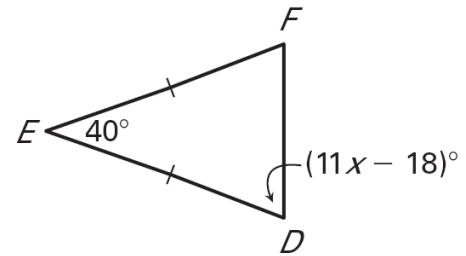
5)



6)

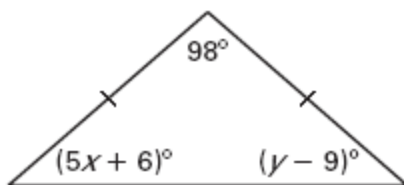


7)

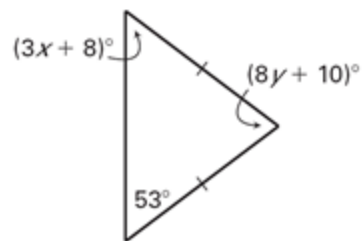


Please find the values of x and y.

8)

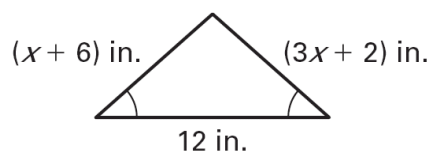


9)



Please find the perimeter of the triangle.

10)



11)

