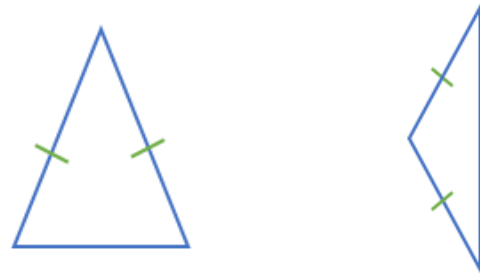


Isosceles Triangles Vocabulary:

The two congruent sides of an isosceles triangle are the _____, and the third side is the _____.

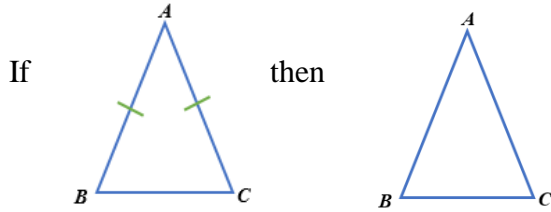
The angle formed by the legs is the _____ angle. The two angles adjacent to the base are called the _____.

Label the legs, vertex \angle , base, and the base \angle 's.



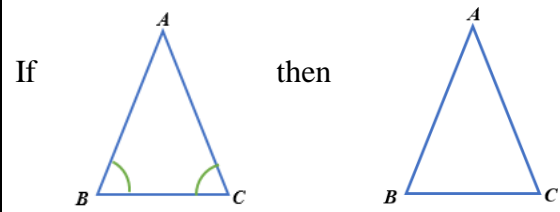
Isosceles Triangle Theorem

If two sides of a triangle are congruent, then the angles opposite them are congruent.

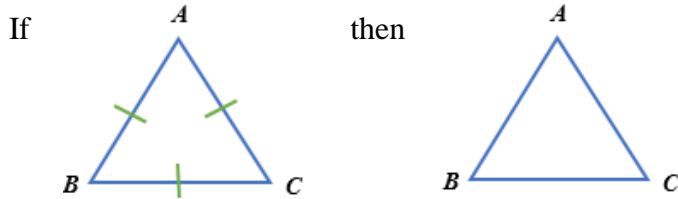


Converse of Isosceles Triangle Theorem

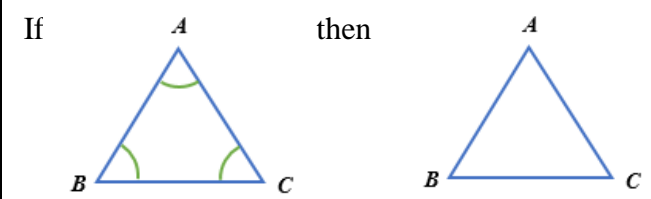
If two angles of a triangle are congruent, then the sides opposite them are congruent.



For equilateral triangles:



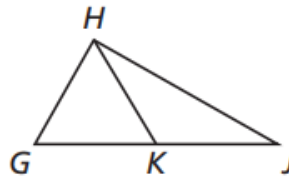
For equilateral triangles:



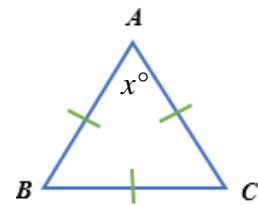
Ex 1: Fill in each blank using the Isosceles \triangle Theorem or its Converse

If $\overline{HG} \cong \overline{HK}$, then $\angle \underline{\hspace{1cm}} \cong \angle \underline{\hspace{1cm}}$.

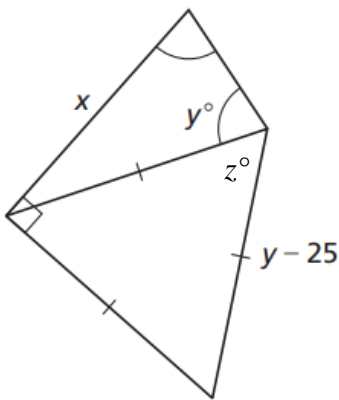
If $\angle K H J \cong \angle K J H$, then $\underline{\hspace{1cm}} \cong \underline{\hspace{1cm}}$.



Ex 2: Find the value of x .



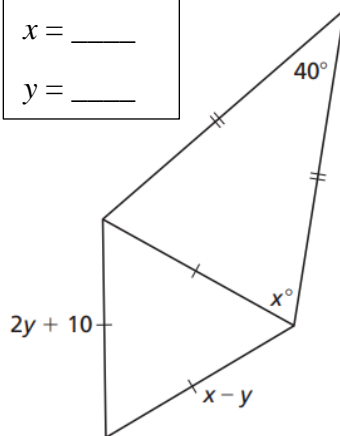
Ex 3: Find the value of x , y , z .



$x = \underline{\hspace{1cm}}$ $y = \underline{\hspace{1cm}}$ $z = \underline{\hspace{1cm}}$

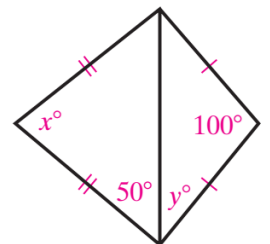
Ex 4: Find the value of x and y .

$x = \underline{\hspace{1cm}}$
 $y = \underline{\hspace{1cm}}$



Ex 5: Find the value of x and y .

$x = \underline{\hspace{1cm}}$
 $y = \underline{\hspace{1cm}}$



Ex 6: Find the $m\angle ABC$.

$m\angle ABC = \underline{\hspace{1cm}}$

