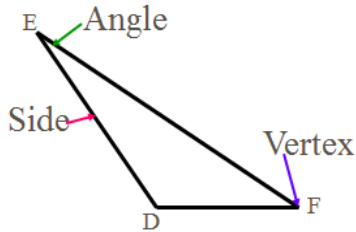


Day 1 – Triangle Base Angles and Exterior Angles

A **triangle** is a figure formed when three noncollinear (not on the same line) points are connected by segments.



The sides are:

Opposite Side of $\angle F$:

The vertices are:

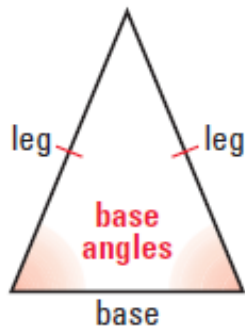
Opposite Side of $\angle E$:

The angles are:

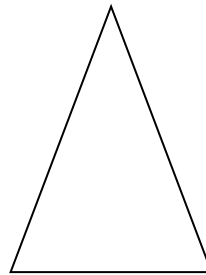
Opposite Side of $\angle D$:

Triangle Sum Theorem: The measures of the three interior angles in a triangle add up to be 180°

Isosceles Base Angle Theorem and Its Converse

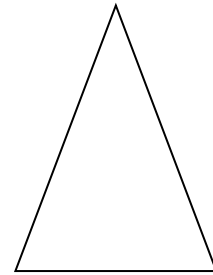


Isosceles Triangle



Base Angles Theorem:

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

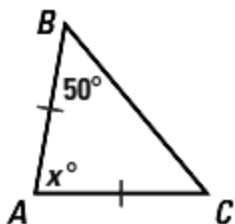


Converse of Base Angles Theorem:

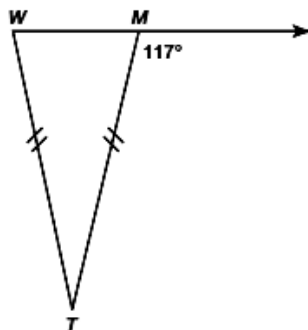
If two angles of a triangle are congruent, then the sides opposite of them are congruent.

Examples:

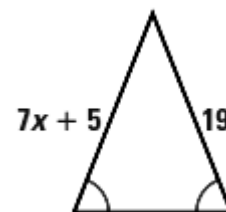
A. Find the value of x



B. Find the $m\angle T$

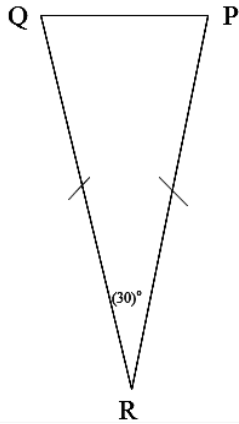


C. Find the value of x .

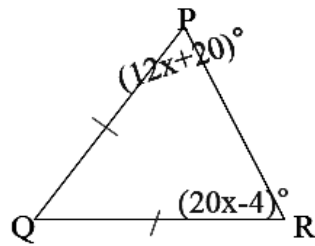


D. Find the measure of $\angle P$.

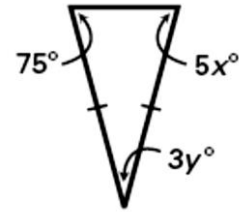
$$\angle R = 30^\circ$$



E. Find the measure of $\angle Q$

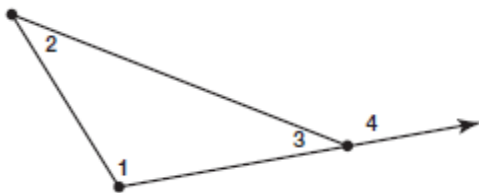


F. Find the value of x & y .



Exterior Angle Theorem

Exterior angle theorem: The measure of an exterior angle of a triangle is equal to the sum of the measures of the two non-adjacent interior angles of the triangle.



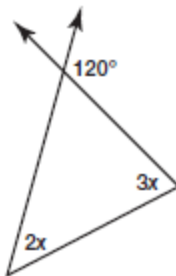
$$m\angle 1 + m\angle 2 = m\angle 4$$

Examples: Solve for x .

A.



B.



C.

