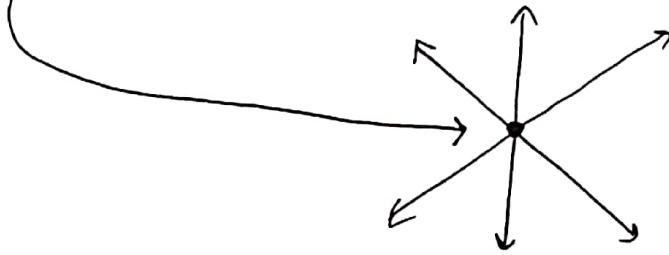


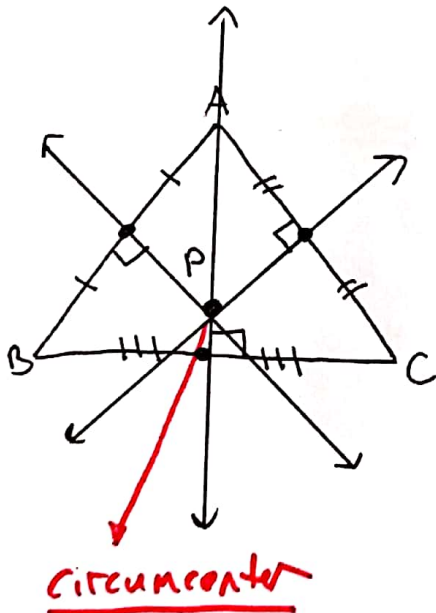
Objective: To use properties of 2/5/19
 triangle perpendicular bisectors
 and triangle angle bisectors.

1.) Point of concurrency: The point of intersection of 3 or more lines.

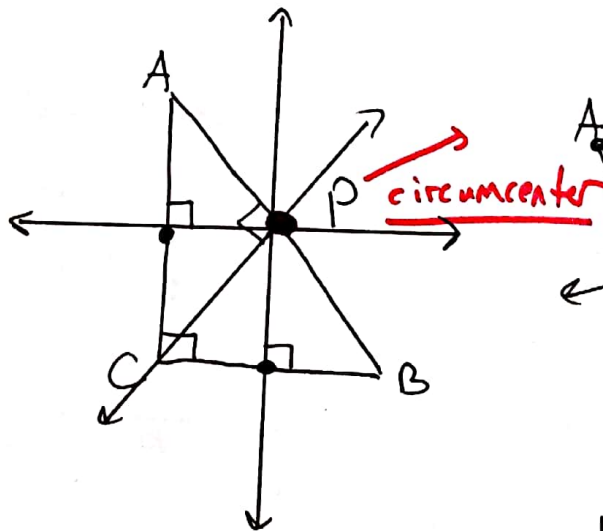


2.) circumcenter: The point of intersection or concurrency of 3 perpendicular bisectors of a triangle.

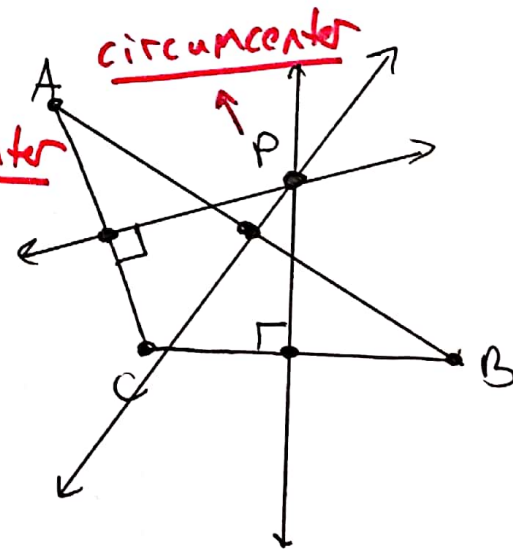
inside : acute



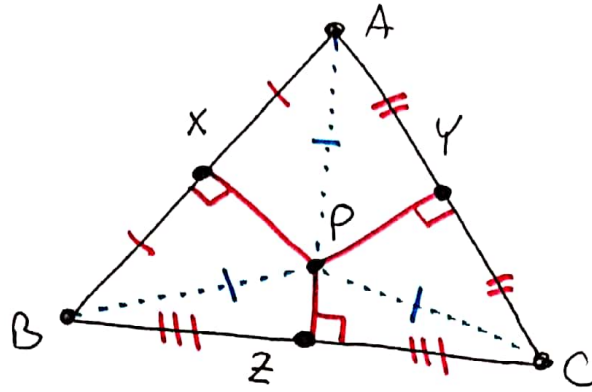
on top : Right



outside : obtuse



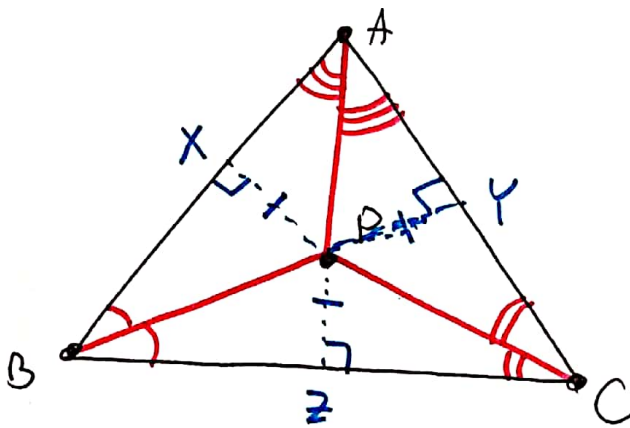
Perpendicular Bisector of a Triangle Theorem



with circumcenter P,

$$\overline{PA} \cong \overline{PB} \cong \overline{PC}$$

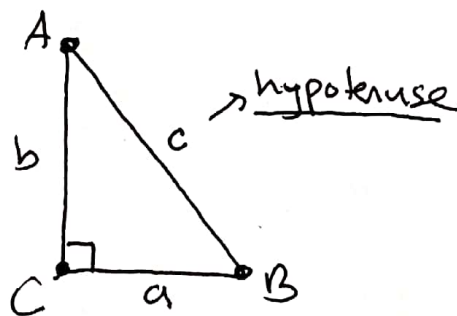
Angle Bisector of a Triangle Theorem



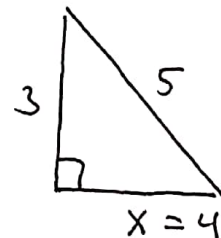
P is now called the incenter; where 3 angle bisectors intersect.

$$\overline{PX} \cong \overline{PY} \cong \overline{PZ}$$

Review: Pythagorean Theorem



$$a^2 + b^2 = c^2$$



$$x = 4$$

$$3^2 + x^2 = 5^2$$

$$9 + x^2 = 25$$

$$\begin{array}{r} 9 + x^2 = 25 \\ -9 \quad -9 \\ \hline x^2 = 16 \end{array}$$

$$x = 4$$