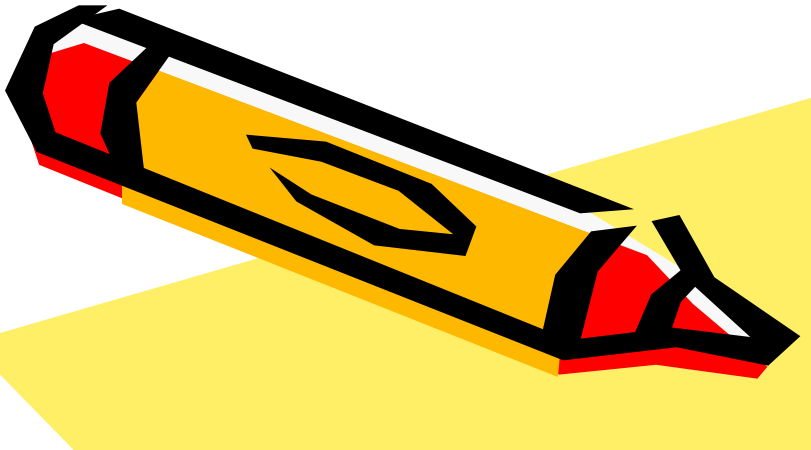
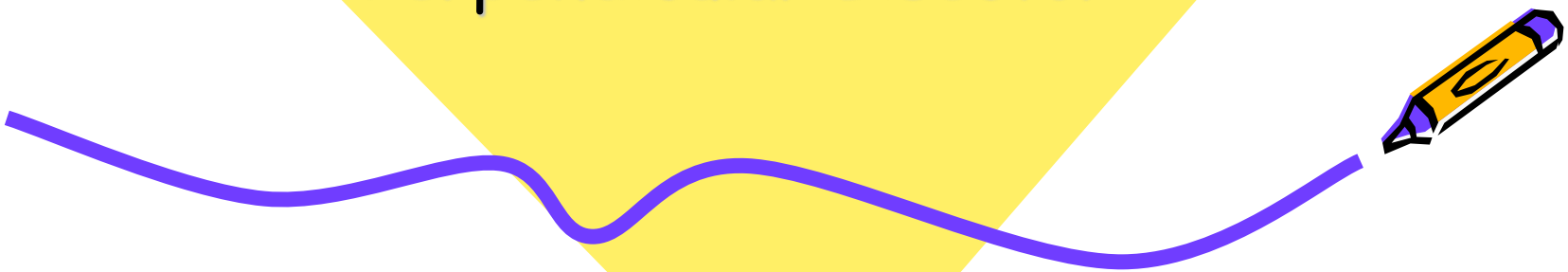


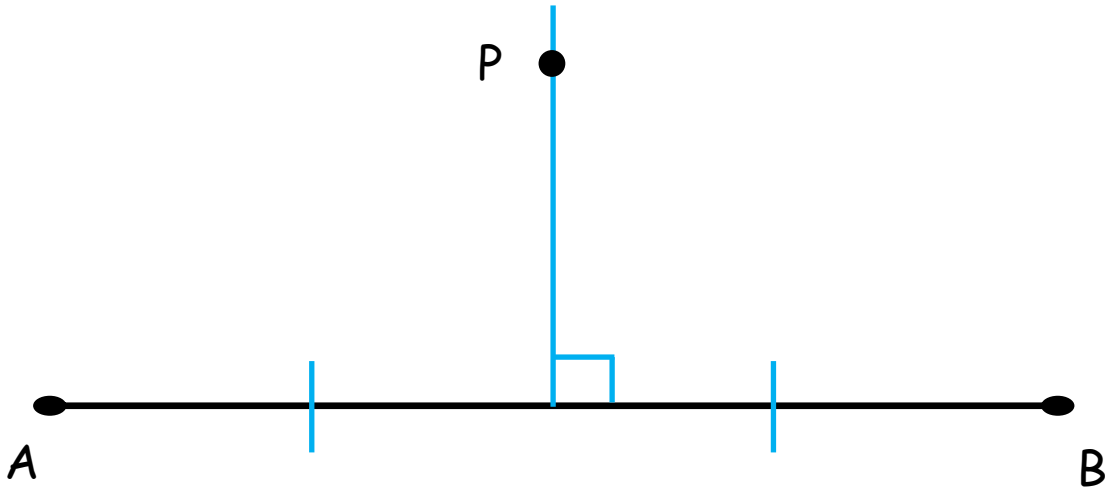
Geometry

Perpendicular Bisector



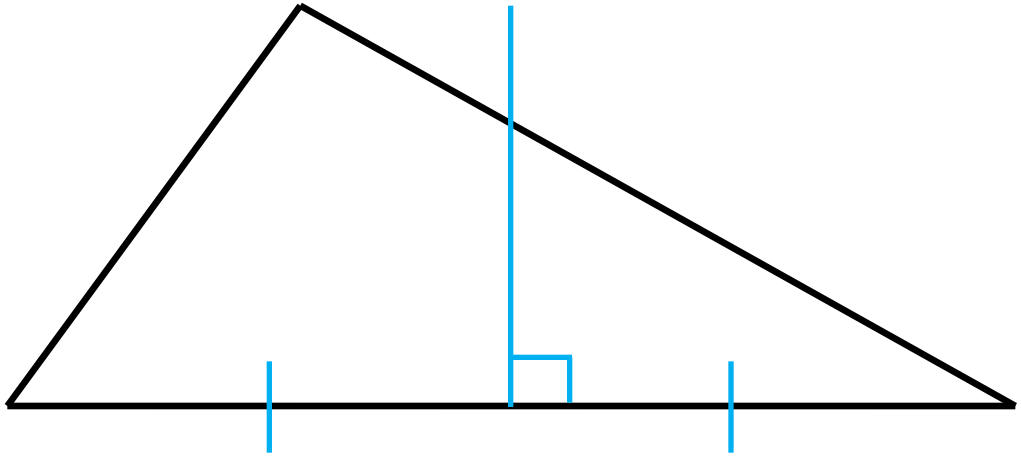
Perpendicular Bisector

A segment that is <u>both perpendicular</u> to, <u>and bisects</u>, a segment. Any given point on the perpendicular bisector is equidistant from the endpoints of the segment that it bisects (PA = PB).



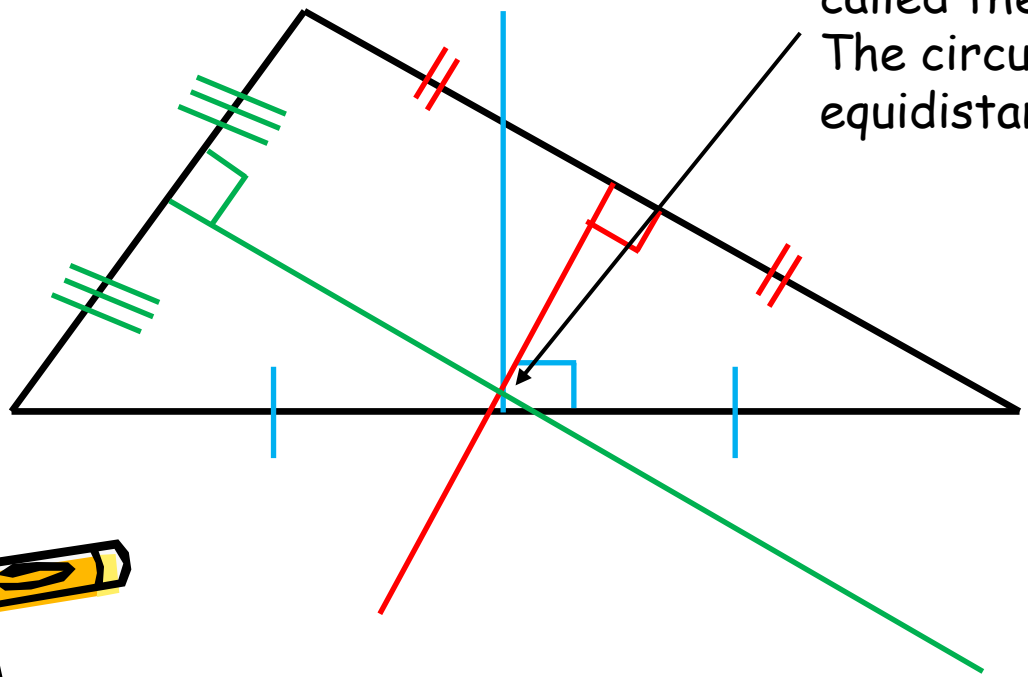
Perpendicular Bisector

A segment that is both perpendicular to, and bisects, a side of a triangle. It does not have to come from a vertex.



Perpendicular Bisector

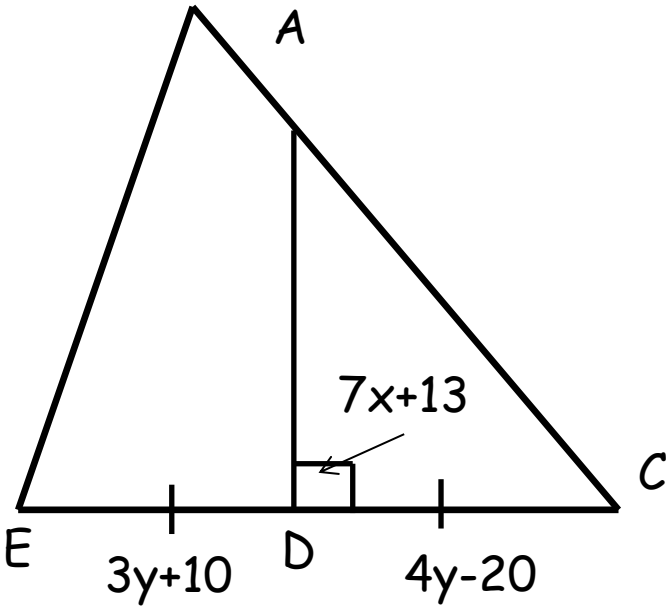
A triangle could have up to 3 perpendicular bisectors.



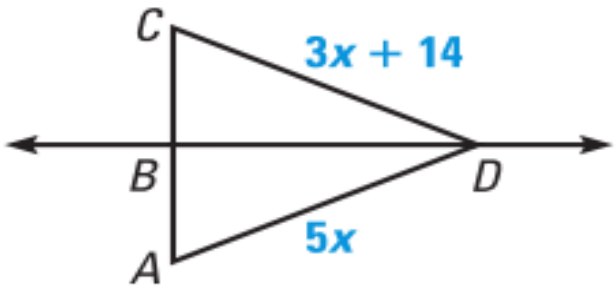
The point of concurrency is called the circumcenter. The circumcenter is equidistant from the vertices

Practice

Find x and y.



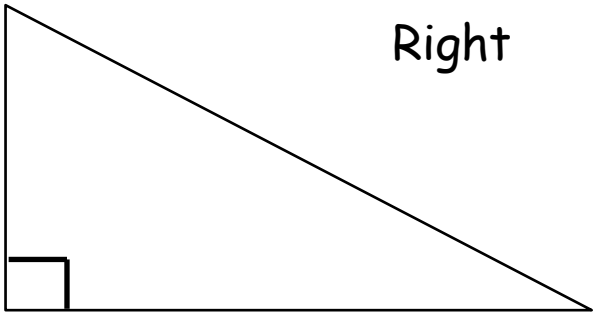
If $\overline{BD}$ is a perpendicular bisector, find CD.



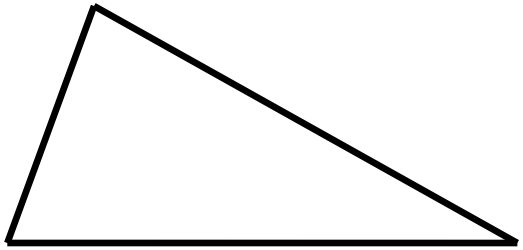
Practice

For each type of triangle: Identify the location of the circumcenter as inside, outside, or on the triangle.

Right



Acute



Obtuse