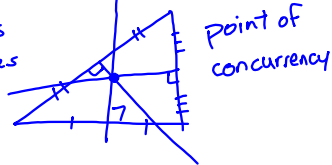


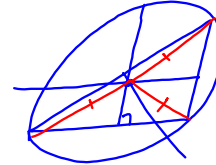
5.2 Bisectors of Triangles

Perpendicular Bisectors

Concurrent lines
Three or more lines
that intersect
at the same point

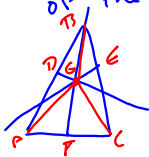


If using Perpendicular Bisectors
the point of concurrency is
the circumcenter



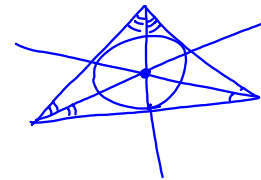
Perpendicular Bisector Thm

The \perp bisectors of a triangle
have a point of concurrency that
is equidistant from the vertices
of the triangle



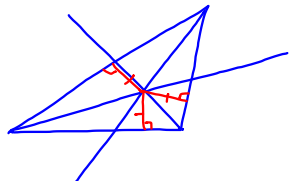
$$\overline{AG} \cong \overline{BG} \cong \overline{CG}$$

Angle bisectors



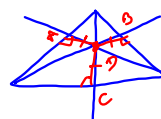
Point of
Concurrence
is called the
incenter

Distance to
the sides



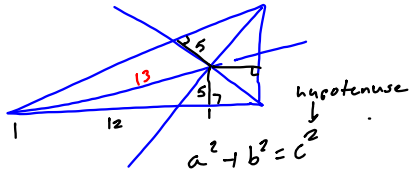
Angle Bisector Thm.

The Angle Bisectors of
a triangle intersect at a point
that is equidistant from
the sides



$$\overline{AD} \cong \overline{BD} \cong \overline{CD}$$

Finding Distance



$$a^2 + b^2 = c^2$$
$$5^2 + 12^2 = c^2$$
$$25 + 144 = c^2$$
$$169 = c^2$$

D 215-277
2-22 even