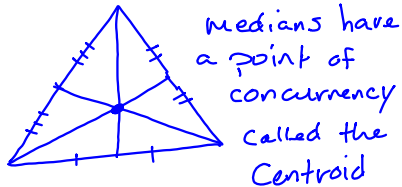5.3   Medians and
          Altitudes of Triangles

Median – a line that
goes from the angle through
the midpoint of the segment
on the opposite side

Medians have
a point of
concurrency
called the
Centroid

The distance of the medians
special based on the location
of the Centroid

The medians of a triangle
intersect at a point that
is $\frac{2}{3}$ the distance of the median
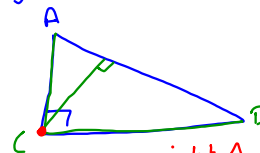

$AC = \frac{2}{3} AB$

$CB = \frac{1}{3} AB$

$DE = 15$
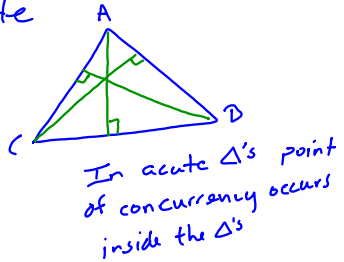$DC = 10$
$CE = 5$
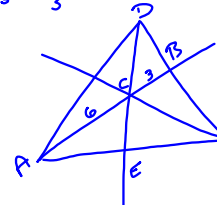
Altitudes –
   Can occur outside, inside
or on a side of the triangle
segment from an angle to
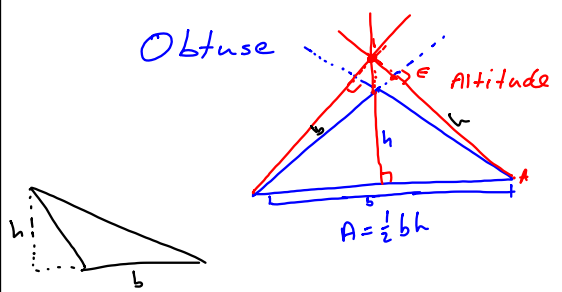a point that is perpendicular
on the opposite side
        Not median

Right

In a right $\triangle$ the point of
Concurrency of altitudes is
at the right angle

Acute

In acute △'s point
of concurrency occurs
inside the △'s

Obtuse

Altitude

$A = \frac{1}{2}bh$

The point of concurrency
for altitudes is called
the orthecenter

Altitudes Thm
The altitudes of a triangle
will intersect at a point that
is inside, outside or on the △

P282-284
2-34 even