

Chapter 5 Test (5.1-5.5 Skip 5.4)

Section 1: Midsegments of a Triangle

- Midsegment- a segment connecting the midpoints of two sides of a triangle.
- A midsegment is both parallel and half of the third side
- Be able to draw a midsegment and know appropriate tick marks.

Section 2: Bisectors of Triangle

- Perpendicular Bisector- a line, segment, or ray that is perpendicular to the segment at its midpoint.
- Know what portions of the perpendicular bisector are congruent
- Be able to draw a perpendicular bisector and know appropriate tick marks and angle measures.
- Angle Bisector- a ray that divides an angle into two congruent angles.
- Know what portions of the angle bisector are congruent
- Be able to draw an angle bisector and know appropriate angle measures.

Section 3: Concurrent Lines, Medians, and Altitudes

- Point of concurrency- where three or more lines intersect
- Concurrent- when three or more lines intersect in one point.
- Median- a segment whose endpoints are a vertex and the midpoint of the opposite side.
- Be able to draw a median and know appropriate tick marks
- Medians- $\frac{2}{3}$ or $\frac{1}{3}$ problems
- Altitude- a perpendicular segment from vertex to the line containing the opposite side of a triangle.
- Altitudes can be inside, on or outside the triangle.
- Be able to draw an altitude for all three types of a triangle.
- Know the names for the point of concurrency
 - Altitudes- orthocenter
 - Angle bisectors- incenter
 - Medians- Centroid
 - Perpendicular bisectors- circumcenter

Section 5: Inequalities in Triangles

- Triangle Inequality Theorem- add any two sides must be greater than the third side
 - Determine if the three sides can make a triangle
 - Determine the possible third side if given two triangles
- Smallest Angles opposite smallest side $\rightarrow$ biggest angles opposite biggest sides