

Chapter 6 Test Prep

1. VOCAB!!!!!!!!!!!!!! Know all of the terms: *(10 points)*
 - a. Def of circumcenter: point of concurrency of the perpendicular bisectors
 - b. Def of incenter: point of concurrency of the angle bisectors
 - c. Def of centroid: point of concurrency of the medians
 - d. Def of orthocenter: point of concurrency of the altitudes
 - e. Midsegment of a triangle: A segment whose endpoints are the midpoints of two sides of the triangle
 - f. Median of a triangle: A segment whose endpoints are a vertex of an angle and the midpoint of the angle's opposite side
 - g. Altitude of a triangle: A segment that passes through the vertex of one angle and is perpendicular to the side opposite of the angle.
 - h. Point-slope form for equation of a line
 - i. Slope-intercept form for equation of a line
2. THEOREMS!!!!!!!!!! Know all of these theorems and how to use them
 - a. Perpendicular Bisector Theorem and its converse *(2 points)*
 - b. Angle Bisector Theorem and its converse *(3 points)*
 - c. Circumcenter Theorem: the circumcenter (formed by perpendicular bisectors) is equidistant from the vertices of the triangle
 - d. Incenter Theorem: the incenter (formed by angle bisectors) is equidistant from the sides of the triangle *(3 points)*
 - e. Centroid Theorem: the centroid (formed by medians) is located $\frac{2}{3}$ of the distance of the median away from the vertex *(3 points)*
 - f. Triangle Midsegment Theorem: a triangle's midsegment is parallel to the third side, and is always half the length of its parallel side. *(8 points)*
 - g. Triangle Longer Side Theorem, Triangle Larger Angle Theorem, and Hinge Theorem and its converse *(8 points)*
 - h. Triangle Inequality Theorem *(10 points)*
 - i. Use to determine if a triangle can be made
 - ii. Use to determine the range of side lengths a third side can be given two sides
3. Find the following in the coordinate plane. (I will only give you one of the following)
 - a. Circumcenter
 - b. Centroid
 - c. Orthocenter
4. Know the general process for writing an indirect proof...