Chapter 7 Test Prep

1. Polygons *(9 points)*
    a. Name polygons by their sides
    b. Tell whether a polygon is convex or concave
    c. Tell whether a polygon is regular or not regular
    d. Find sum of interior angles of a polygon
    e. Use interior angle sum to determine number of sides the polygon has
    f. Use interior sum to determine the measure of each interior angle in a regular polygon
    g. Know any polygon's sum of exterior angles is 360° (regardless of whether the polygon is regular or not)
    h. Find the measure of one exterior angle in a regular polygon
2. Parallelograms and Special Parallelograms (Rectangle, Rhombus, Square)
    a. Use properties of parallelograms to find angle measures and side lengths *(9 points)*
    b. Use properties of special parallelograms to find angle measures and side lengths *(10 points)*
    c. Determine whether a quadrilateral with given information is a parallelogram, rectangle, rhombus, and/or square, justify your answer! *(15 points)*
    d. Determine and prove whether a quadrilateral is a parallelogram in the coordinate plane. SHOW ALL NECESSARY WORK!!!!!!!! *(7 points)*
3. Kites
    a. Use properties of kites to find angle measures *(3 points)*
4. Trapezoids and Isosceles Trapezoids
    a. Use properties of trapezoids and isosceles trapezoids to find angle measures *(7 points)*
    b. Use the Trapezoid Midsegment Theorem to find the length of one base or the midsegment *(6 points)*
5. Always/Sometimes/Never with properties of ALL polygons/quadrilaterals discussed in the unit *(4 points)*
    a. i.e. "Is a square also a rectangle?" or "Is a parallelogram also a trapezoid?" or "Are the diagonals of a trapezoid perpendicular?" etc.
6. Write a coordinate proof. *(7 points)*
    a. Remember, for rectangles/rhombuses/squares, you not only have to show what the quadrilateral is, but you also have to show what it is not!
7. Write a two-column proof using quadrilaterals *(5 points)*
    a. You will need to know all properties of all quadrilaterals discussed in the unit
    b. You may want to review…
        i. Proving Δs congruent and using CPCTC
        ii. Angle relationships with parallel lines and transversals
        iii. Properties of isosceles triangles (i.e. Base Angles Theorem and its converse)