

Chapter 6 Quiz Prep

1. Draw examples of: (3 points)
 - a. Concave polygons
 - b. Convex polygons
 - c. Regular polygons
2. Find the sum of the interior angles of a polygon, and use it to find unknown variables/angle measures within the polygon. (4 points)
3. Given the sum of the interior angles of a polygon, determine how many sides the polygon has and name the polygon by the number of sides (3 points)
4. Use **properties** of parallelograms to find unknown angle measures and side lengths (6 points)
 - a. If $\parallel$ -gram $\rightarrow$ opposite sides congruent
 - b. If $\parallel$ -gram $\rightarrow$ opposite angles congruent
 - c. If $\parallel$ -gram $\rightarrow$ consecutive angles supplementary
 - d. If $\parallel$ -gram $\rightarrow$ diagonals bisect each other
 - e. Remember, properties are different than the definition!!!
 - i. DEFINITION of a $\parallel$ -gram: a quadrilateral with 2 pairs of opposite $\parallel$ sides
5. Given a diagram, determine if the quadrilateral is a parallelogram, and justify your answer with a description of the theorem used, or the name of the theorem used (4 points)
 - a. If opposite sides parallel $\rightarrow$ $\parallel$ -gram
 - b. If opposite sides congruent $\rightarrow$ $\parallel$ -gram
 - c. If opposite angles congruent $\rightarrow$ $\parallel$ -gram
 - d. If one pair of opposite sides are parallel and congruent $\rightarrow$ $\parallel$ -gram
 - e. If diagonals bisect each other $\rightarrow$ $\parallel$ -gram
6. Write a two-column proof: given a diagram, prove that the quadrilateral is a parallelogram. (5 points)
 - a. REVIEW THE FOLLOWING! You may need to use it in the proof...
 - i. Congruent Triangles and CPCTC
 - ii. Base Angles Theorem/Converse of Base Angles Theorem (Isosceles Triangles)
 - iii. Angle relationships with parallel lines and transversals...
 - a. If $\parallel \rightarrow$ corresponding angles congruent
 - b. If $\parallel \rightarrow$ alternate interior angles congruent
 - c. If $\parallel \rightarrow$ alternate exterior angles congruent
 - d. If $\parallel \rightarrow$ consecutive angles supplementary
 - e. If corresponding angles congruent $\rightarrow \parallel$
 - f. If alternate interior angles congruent $\rightarrow \parallel$
 - g. If alternate exterior angles congruent $\rightarrow \parallel$
 - h. If consecutive angles supplementary $\rightarrow \parallel$