

Prepare for the exam by carefully studying this list with reference to your notes, textbook, in-class activities, homework, and quizzes. **Bring an approved calculator.**

**Basic Definitions and Properties:**

1. List in order the names of the five van Hiele levels.
2. Memorize, correctly spell all terms on Summary #2 and in notes for fill-in problems.
3. Draw examples of each, marking clearly. When relevant, your markings should clearly show:
  - Congruent sides marked the same; non-congruent sides marked differently.
  - Congruent angles marked the same; non-congruent angles marked differently.
  - Right angles marked  $\neg$ ; acute angles labeled  $< 90^\circ$ ; obtuse angles marked  $> 90^\circ$ .
  - For polygons, number each side to show the count clearly.
4. Identify examples, non-examples of Summary #2/notes terms in a given diagram.
5. Name points, lines, segments, rays, angles w/correct notation.
6. Use correct notation to solve union, intersection problems.
7. The name/definition prevail even when the object's not originally drawn.
8. Create zero, acute, right, obtuse, straight, reflex angles on square grids.
9. Measure or create angles using a protractor (provided for you).
10. Compute angle measurements formed by working clock hands at a given time.
11. Name a time at which a given angle is formed on a working clock.
12. Identify transversals, corresponding, alternate interior, alternate exterior angles in diagrams with parallel lines. Spell these terms correctly.
13. Use congruence facts about corresponding, alternate interior/exterior, vertical, supplementary, and triangle angles to find measurements of marked angles in a diagram. Prepare to explain EACH angle at a time, as in notes and quiz, and label new angles as you need them.

**Polygons:**

1. Identify, draw curves that are simple/not, closed/not, polygonal/not, convex/concave. Spell these.
2. Know, spell names of polygons from 3-12 sides, vertex, side, diagonal for fill-in or explanations.
3. Know, spell equilateral, equiangular, regular; identify, draw polygons with/without these qualities.
4. Find the number of diagonals from one vertex or in total for a given polygon. Explain when asked.
5. Determine whether a given number of diagonals is possible (guess/check with square root help).
6. Refer to diagonals and triangles to explain how to find a polygon's interior angle total.
7. Memorize, use the formula for the interior (aka vertex) angle total in an  $n$ -gon. Know both terms.
8. Compute interior angle total when told the number of sides or name of polygon.
9. Find the size of EACH interior angle when told about a regular or equiangular polygon.
10. Find missing angle measurements in diagrams of polygons, as in HW and quiz. Explain reasoning.
11. Find the number of sides when told about the angles.
12. Use formula or guess and check to tell whether given interior angle measures are possible.

**Triangles and Quadrilaterals:**

1. Correctly spell names of all triangles, quadrilaterals for fill-ins, explanations.
2. Draw or recognize examples, non-examples of each, marking key features as described above.
3. Tell which quadrilaterals are special kinds of others; use the family tree.