

Geometry 1-2 Notes (1st semester) – Table of Contents

- Chapter 1: Intro to Geometry
 - 1.1: Basic Definitions (point, ray, line, etc.)
 - 1.2: Measuring, definitions of angles
 - 1.3: Collinearity / betweenness
 - 1.4: Simple proofs
 - 1.5: Bisectors/Trisectors
 - 1.7: Postulates/Theorems, Conditional Statements
 - 1.8: Logic – Converse, Inverse, Contrapositive
 - 1.9: Probability
- Chapter 2: Starting theorems and proofs
 - 2.1: Perpendicular lines
 - 2.2: Complementary and Supplementary Angles
 - 2.3: Making Conclusions (proofs)
 - 2.4: Congruent lines and angles
 - 2.5: Addition and Subtraction Properties
 - 2.6: Multiplication and Division Properties
 - 2.7: Transitive and Substitution Properties
 - 2.8: Vertical angles congruent
- Chapter 3: Congruent Triangles
 - 3.1: What are congruent figures? Sliding, rotation, Reflexive Property
 - 3.2: 1st 3 Triangle Congruency Shortcuts: SSS, SAS, ASA
 - 3.3: CPCTC, also: intro to Circles (area, perimeter/circumference, radii congruent)
 - 3.4: Proofs with steps after CPCTC
 - 3.5: Overlapping Triangles (redrawing to see better in proofs, which triangles to use)
 - 3.6: Kinds of Triangles (scalene, isosceles, etc.)
 - 3.7: Angle-Side theorems (short side opp. small angle)
 - 3.8: 4th Triangle Congruency Shortcut: HL (for right triangles)
- Chapter 4: Lines and Planes
 - 4.1 & 4.6: Midpoint and Slope formulas for lines
 - 4.2: 'Make a proof problem' from words (diagramless proofs)
 - 4.3: Angles both congruent and supplementary are right angles
 - 4.4: Equidistance / perpendicular bisector theorems
 - 4.5: Intro to parallel lines: def. of alternate interior, etc. angle pairs
- Chapter 5: Parallel Lines
 - 5.2: Proving lines are parallel (from angles)
 - 5.3: Proving angles congruent or supplementary (given parallel lines)
 - 5.4: Intro to Polygons, Quadrilaterals
 - 5.5: Properties of Quadrilaterals
 - 5.6: Proving a quadrilateral is a parallelogram
 - 5.7: Proving special quadrilaterals (kite, rhombus, trapezoid, etc.)
- Chapter 7: Polygons
 - 7.1: Triangles: angles add to 180, def. of exterior angle, midlines
 - 7.2: No-Choice Theorem, 5th Triangle Congruency shortcut: AAS
 - 7.3: Polygon formulas: sum of interior angles, sum of exterior angles, diagonals
 - 7.4: Regular Polygons, exterior angles of regular polygons
- Chapter 6:
 - 6.1&6.2: Planes, lines perpendicular to planes
- Supplemental: Counting, Combinations and Permutations