

Name: _____

Period: _____

Date: _____

Mr. Valentino

Midterm Test Topics

Take a
trip to...



Unit 1

- Angles on a line, around a point, complementary, supplementary, etc.
- parallel lines cut by a transversal
 - auxiliary lines
- angles inside and outside a triangle
 - exterior angle theorem
 - triangle sum theorem
- classifying triangles (acute, obtuse, right, equilateral, isosceles, scalene)
- angle-side relationships
- triangle inequality theorem

Unit 2

- Constructions
 - copying a line segment and angle
 - angle bisector
 - perpendicular bisector
 - equilateral triangle given a line segment
 - parallel line through a point
 - perpendicular through a point on/off the line
 - hexagon in a circle
 - square in a circle
 - equilateral triangle in a circle

Unit 3

- Special Segments
 - median
 - altitude
 - angle bisector
 - perpendicular bisector
 - ID'ing the segment
- Centers
 - centroid
 - orthocenter
 - incenter
 - circumcenter
 - ID'ing the center

Unit 4

- Symmetry
 - Line, rotational, point
- Transformations
 - Reflection
 - Coordinate rules for: x-axis, y-axis, $y=x$, $y=-x$
 - Constructing a reflected image
 - Constructing the line of reflection/symmetry
 - Rotation
 - Coordinate rules for: 90° , 180° , 270°
 - Constructing the center of rotation
 - # of degrees needed to rotate an image from a vertex to another
 - Translation
 - Coordinate rule for translation $(x+a, y+b)$
 - Properties of Transformations
 - Orientation
 - Preserved
 - Rigid motion
 - Isometry (direct and opposite)

Unit 5

- Methods of Proving Triangles Congruent
 - SSS
 - SAS
 - AAS
 - ASA
 - HL
 - CPCTC (for PARTS of triangles ONLY – know what it stands for)
- Properties, Postulates, Definitions
 - Reflexive Property
 - Addition Postulate
 - Subtraction Postulate
 - Definitions – Midpoint, Segment Bisector, Angle Bisector, Perpendicular, Isosceles Triangle, Right Triangle, Altitude, Median, etc.

Unit 6

- Similarity Proofs
 - AA (formal 2 column Proofs), SAS and SSS (informal proofs)
- Similar Figures
 - Angle and Side relationships
 - Side splitter (PROPORTIONS! PROPORTIONS! PROPORTIONS!)
 - Midsegment
 - Ratio of areas and perimeters compared to sides
 - Geometric Mean (altitude and leg rule)
- Dilations
 - Constructing dilated figures
 - Dilations of lines and points

Unit 7

- Special Right Triangles
 - 30-60-90
 - 45-45-90
- Indirect Proofs
- Using Trigonometry to find side lengths
- Using Trigonometry to find angle measures (Inverse Trig Functions)
- Angle of Elevation and Depression