Geometry – Mastery Exam Topics

Scientific Calculator Allowed

No Formulas Given

- Algebra Skills
    - Radicals
        - Add, subtract, multiply, divide, simplify
    - Proportions
    - System of Equations
    - Solving Linear Equations
- Angle Relationships
    - Vertical angles
    - Straight angles
    - Complementary angles
    - Supplementary angles
    - Angles formed with parallel lines and a transversal
- Transformations
    - Rotation
    - Reflection
    - Translation
    - Dilation
- Polygons
    - Similar polygons (in general)
    - Triangles
        - Exterior angle relationships
        - Interior angle sum
        - Side length relationships (including, but not limited to, Pythagorean Theorem)
        - Isosceles triangle properties
        - Perimeter
        - Area
        - Special right triangles **(**$30° - 60° - 90°,\ 45° - 45° - 90°$)
        - Right Triangle Trigonometry
        - Proving triangles congruent
        - Proving triangles similar

        - Properties of similar triangles
    - Quadrilaterals
        - Properties of parallelograms (sides, angles, and diagonals)
        - Perimeter
        - Area
- Solids
    - Rectangular Prism
        - Surface Area
        - Volume
- Circles
    - Relationship between circumference, diameter, and radius
    - Area of circles
- Proofs
    - Parallel lines and transversals
    - Congruent triangles