



# Yearly Overview GEOMETRY

2020-2021

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## Semester 1

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### Term 1

- **Introduction to Geometry**
    - Points, Lines, Planes, Postulates
    - Inductive and Deductive Reasoning
    - Conditional and Bi-Conditional Statements
  
  - **Transformations**
    - Reflections and Translations
    - Rotations
    - Compositions and Symmetry
  
  - **Angles**
    - Angle Relationships
    - Parallels and Transversals
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### Term 2

- **Triangles**
  - Definitions and Theorems
  - Congruency
  
- **Relationships in Triangles**
  - Special Segments
  - Inequalities in Triangles
  
- **Quadrilaterals**
  - Polygons of n-sides
  - Parallelograms and Rectangles
  - Squares and Rhombi
  - Kites and Trapezoids

## Semester Review and Exam

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## Semester 2

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### Term 3

- **Lines**
    - Slopes and Equations of Lines
    - Distance and Midpoint
  - **Similarity**
    - Proportions, Ratios, and Geometric Mean
    - Triangles
    - Dilations
    - Scale Factor
  - **Right Triangles**
    - Pythagorean Theorem
    - Special Right Triangles
    - Trigonometric Ratios
    - Applications
  - **Circles**
    - Angles and Segments
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### Term 4

- **Circles**
  - Circumference and Area
  - Arc Length and Sector Area
  - Equation
- **Volume and Surface Area**
  - Volume: Prisms, Cylinders, Pyramids, Cones, Composite Figures
  - Surface Area: Prisms, Cylinders, Pyramids, Cones, Composite Figures
  - Spheres and Spherical Geometry
  - Cross Sections and Solids of Rotation
- **Perimeter and Area**
  - Regular Polygons
  - Problem Solving
- **Probability**
  - Geometric Probability
  - Set Theory
  - Permutations and Combinations
  - Mutually Exclusive and Overlapping Events
  - Conditional Probability
  - Independent and Dependent Events

### **Semester Review and Exam**

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