

Geometry

1. Tools of Geometry

- 1.1 Geometry Terminology
- 1.2 Geometrical Shapes
- 1.3 Measuring Line Segments
- 1.4 Types of Angles and Measuring Angles
- 1.5 Basic Constructions
- 1.6 The Midpoint of a line segment
- 1.8 Finding Perimeters
- 1.9 Finding Areas of Rectangles and Squares
- 1.10 Finding Areas of Triangles, Parallelograms, and Trapezoids
- 1.11 Finding the Circumference and Area of a Circle

2. Reasoning and Proof

- 2.1 Logical Reasoning: A foundation for geometric proofs
- 2.2 Logical Statements
- 2.3 Valid Vs. Invalid Arguments
- 2.4 Euclidean Geometry-A Mathematical System

3. Parallel and Perpendicular Lines

- 3.1 Types of angles and Angle Pairs
- 3.2 Transversal and Angle Pairs
- 3.3 Parallel Lines and Special Angle Pairs
- 3.4 Check for Parallel Lines
- 3.5 Perpendicular lines; Angle Bisectors; Perpendicu...
- 3.6 Slope of a Line
- 3.7 Various Forms of the Equation of a Line
- 3.8 Slopes of Parallel and Perpendicular Lines

4. Congruent Triangles

- 4.1 Congruent Triangles (Introduction)
- 4.2 Congruence of Triangles
- 4.3 Criteria for Congruence of Triangles
- 4.4 Properties of Triangles
- 4.5 The Mid Point Theorem
- 4.6 Right Triangles and Congruence

5. Polygons and Quadrilaterals

- 5.1 Polygons
- 5.2 Quadrilateral
- 5.3 Quadrilaterals: Parallelograms and Kites
- 5.4 Rectangles, Squares and Rhombi

5.5 Trapezoids

5.6 Sum of the Measure of Interior and Exterior An...

5.7 Properties of a Parallelogram

5.8 Sufficient Conditions for a Quadrilateral to b...

6. Similarity

6.1 Ratios and Proportions

6.2 Concept of Similarity

6.3 Basic Proportionality Theorem

6.4 Condition for Similarity

6.5 Right Angled Triangle and Similarity

7. Right Triangles and Trigonometry

7.1 The Pythagoras Theorem

7.2 Special Right Triangles

7.3 Trigonometric Ratios

7.4 Trigonometric Ratios of Specific Angles

7.5 Trigonometric Identities

7.6 Trigonometric Ratios of Complementary Angles

8. Circles

8.1 Circles and its Related Terms

8.2 Tangent to a Circle

8.3 Number of Tangents to a Circle

8.4 Angle Subtended by a Chord at a Point

8.5 Chords of a Circle and its Related Theorems

8.6 Angles Subtended by an Arc of a Circle

8.7 Circles in the Coordinate Plane

9. Probability

9.1 Probability

9.2 Central Tendency Measures