

# Geometry Quick Reference Sheet

## What is Geometry?

Geometry is the branch of mathematics that deals with shapes, sizes, relative positions, and properties of space.

## 2D Shapes

- Triangle: 3 sides
- Square: 4 equal sides
- Rectangle: 4 sides, opposite sides equal
- Circle: All points equidistant from the center
- Hexagon, Pentagon, Octagon: Polygons with 6, 5, and 8 sides respectively.

## 3D Shapes

- Cube: 6 equal square faces
- Sphere: Perfectly round, no edges
- Cylinder: 2 circular bases and a curved surface
- Cone: 1 circular base, tapers to a point
- Pyramid: Base with triangular sides

## Types of Angles

- Acute: Less than  $90^\circ$
- Right: Exactly  $90^\circ$
- Obtuse: Between  $90^\circ$  and  $180^\circ$
- Straight: Exactly  $180^\circ$

## Angle Relationships

- Complementary: Sum =  $90^\circ$
- Supplementary: Sum =  $180^\circ$
- Vertical: Opposite angles, equal
- Adjacent: Next to each other, share a vertex

## Key Terms

- Point: Location in space
- Line: Straight, endless in both directions
- Ray: Starts at one point, extends infinitely
- Segment: Part of a line with two endpoints
- Plane: Flat, 2D surface extending infinitely