Angles and Lines Reference

Complete reference for angle types, angle relationships, and properties of parallel lines.

Types of Angles

Acute: less than 90 degrees

Right: exactly 90 degrees

Obtuse: between 90 and 180 degrees

Straight: exactly 180 degrees

Reflex: between 180 and 360 degrees

Angle Pairs

Complementary: two angles that sum to 90 degrees

Supplementary: two angles that sum to 180 degrees

Vertical angles: opposite angles formed by two intersecting lines, always equal

Parallel Lines and Transversal

Corresponding angles: equal (same position at each intersection)

Alternate interior: equal (opposite sides, between lines)

Alternate exterior: equal (opposite sides, outside lines)

Co-interior: sum to 180 degrees (same side, between lines)

Polygon Angles

Triangle: interior angles sum to 180 degrees

Quadrilateral: interior angles sum to 360 degrees

Any polygon: interior angles = (n - 2) x 180 degrees

Each interior (regular): ((n - 2) x 180) / n

Exterior angles: always sum to 360 degrees

Each exterior (regular): 360 / n

Always look for parallel lines in diagrams. They unlock angle relationships that make problems much easier to solve.