Pre-Geometry Vocabulary

These are geometry terms you likely saw in middle school, but might have forgotten since then. Knowing these will make learning the new material easier, even if some might not come up until later in the course.

The Basics

Term	Definition	Visual
Point	An exact location with no size or shape.	
Line	A straight path that goes on forever in both directions.	
Line Segment	A part of a line with two endpoints.	
Ray	A part of a line that starts at one point and goes on forever in one direction.	
Plane	A flat surface that extends forever in all directions.	
Angle	A figure formed by two rays that share an endpoint.	

Angles and Lines

Term	Definition	Visual
Acute Angle	An angle smaller than 90°.	
Right Angle	An angle that measures exactly 90°.	
Obtuse Angle	An angle greater than 90° but less than 180°.	
Parallel Lines	Lines that never intersect and stay the same distance apart.	
Perpendicular Lines	Lines that intersect to form right angles.	
Complementary Angles	Two angles whose measures add up to 90°.	
Supplementary Angles	Two angles whose measures add up to 180°.	

Polygons

Term	Definition	Visual
Polygon	A closed figure formed by three or more line segments (sides).	
Triangle	A polygon with three sides.	
Quadrilateral	A polygon with four sides.	
Rectangle	A quadrilateral with four right angles.	
Square	A rectangle with four equal sides.	
Parallelogram	A quadrilateral with two pairs of parallel sides.	
Trapezoid	A quadrilateral with at least one pair of parallel sides.	

Circles

Term	Definition	Visual
Circle	A set of points that are all the same distance from a center point.	
Radius	A segment from the center of a circle to the circle.	
Diameter	A segment through the center of a circle with endpoints on the circle.	
Circumference	The distance around a circle.	

Measurement

Term	Definition	Visual
Perimeter	The distance around a polygon.	
Area	The amount of space inside a two-dimensional figure.	
Volume	The amount of space inside a three-dimensional figure.	

Coordinate Plane

Term	Definition	Visual
Coordinate Plane	A grid formed by the x-axis and y-axis.	
x-axis	The horizontal axis on a coordinate plane.	
y-axis	The vertical axis on a coordinate plane.	
Origin	The point $(0, 0)$ where the x-axis and y-axis intersect.	
Ordered Pair	A pair of numbers that tell a point's location on a coordinate plane.	

Transformations

Term	Definition	Visual
Transformation	A function (rule) that moves or changes a figure in some way.	
Translation	A transformation that slides a figure without turning or flipping it.	
Reflection	A transformation that flips a figure across a line.	
Rotation	A transformation that turns a figure around a point.	
Dilation	A transformation that makes a figure larger or smaller while keeping its shape.	

Miscellaneous

Term	Definition	Visual
Congruent Figures	Figures that have the same size and shape.	
Similar Figures	Figures that have the same shape but may have different sizes.	
Scale Factor	The number used to enlarge or reduce a figure.	
Symmetry	When a figure can be divided into matching halves.	
Pythagorean Theorem	A rule for finding side lengths in right triangles: $a^2 + b^2 = c^2$.	