

Term	Definition	Notes
Surface	Separates one portion of space from an adjoining portion.	<ul style="list-style-type: none"> • Types of surfaces: plane, curved. • Surfaces only have 2 dimensions (length, width)
Line	Separates one portion of a surface from an adjoining portion. It is the intersection of two surfaces.	<ul style="list-style-type: none"> • Lines have only 1 dimension (length). • Lines extend without limit in both directions. • Lines are named by using any two points on the line or by using a single lower case letter.
Point	Separates one portion of a line from an adjoining portion. Intersection of 2 lines.	<ul style="list-style-type: none"> • A point has no dimension. It has position only. • Points are named using capital letters.
Ray	A ray is that portion of a straight line that extends without limit in one direction only from a point.	<ul style="list-style-type: none"> • A ray has only 1 end point.
Line segment	That portion of a line contained between 2 of its points.	
Straight edge	Instrument used for drawing straight lines	
Ruler	Instrument used for both drawing straight lines and measuring line segments	

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Angle	An angle is a geometric figure formed by two rays drawn from the same point.	<ul style="list-style-type: none"> • The rays are called sides of the angle. • The common point shared by the rays is called the vertex (plural, vertices) of the angle. • Angles are labeled using 3 capital letters (one at the vertex and one at each side). The angle is then read using all 3 letters with the vertex letter always in the middle. • If there is only 1 angle at the vertex, then the single letter corresponding to the vertex can be used to name the angle. • Sometimes a lowercase letter is placed in the opening of the angle to name it.
Adjacent angles	Angles which have the same vertex and a common side between them.	
Vertical angles	Vertical angles are two angles such that the sides of one are the extension through the vertex of the sides of the other.	
Straight angle	An angle whose sides lie on the same straight line and extend in opposite directions from the vertex.	<ul style="list-style-type: none"> • All straight angles are equal

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Perpendicular lines	Two lines are perpendicular when they form equal adjacent angles.	
Right angle	An angle whose sides are perpendicular	<ul style="list-style-type: none"> All right angles are equal.
Acute angle	An angle less than a right angle.	
Obtuse angle	An angle greater than a right angle and less than a straight angle.	
Reflex angle	An angle greater than a straight angle and less than a round angle.	
Complimentary angles	Two angles whose sum is a right angle.	<ul style="list-style-type: none"> One of the angles is said to be the compliment of the other angle.
Supplimentary angles	Two angles whose sum is a straight angle.	<ul style="list-style-type: none"> One of the angles is said to be the supplement of the other angle.
Conjugate angles	Two angles whose sum is a round angle	
Bisector	Bisector of any magnitude is that which divided the magnitude into two equal parts.	<ul style="list-style-type: none"> An angle bisector divides an angle into 2 equal angles. A line segment bisector divides the line segment into 2 equal parts.

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Polygon	A polygon is a closed broken line.	<ul style="list-style-type: none"> • The line segments making up the polygon are the sides and their intersections are the vertices of the polygon. • Two sides that meet at any vertex are called adjacent sides.
Exterior angle	An exterior angle of a polygon is the angle formed by one side of the polygon and the extension of an adjacent side.	
Interior angle	An interior angle of a polygon is an inside angle of the polygon formed by two adjacent sides of the polygon.	

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Triangle	Polygon having 3 sides	<ul style="list-style-type: none"> • Triangle classification according to side lengths: <ol style="list-style-type: none"> 1. Scalene triangle – No sides equal. 2. Isosceles Triangle – two sides are equal. 3. Equilateral – All sides are equal. • Triangle classification according to angles: <ol style="list-style-type: none"> 1. Acute triangle – All acute angles. 2. Obtuse triangle – Triangle has one obtuse angle. 3. Right triangle – Triangle has 1 right angle. 4. Equiangular triangle All angles are =

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Circle	A circle is a closed curve whose point are the same distance from a fixed point within the curve called the center.	<ul style="list-style-type: none"> • Length of the circle is called the circumference. • A line segment joining any two points on the circle is called a chord. • A diameter is a chord which passes through the center of the circle. • A line segment from the center to a point on the circle is called the radius (plural, radii). • Equal circles have equal radii or equal diameters.
Arc	Any portion of a circle	
Semicircle	Half a circle	
Quadrant	One fourth of a circle	<ul style="list-style-type: none"> • Quadrants are numbered counterclockwise
Central angle	An angle whose vertex is at the center of the circle and whose sides are radii.	
An inscribed angle	An angle whose vertex is on the circle and whose sides are chords of the circle.	
Arc degree	An arc degree is the length of the arc intercepted on a circle by the sides of a central angle of 1 degree.	<ul style="list-style-type: none"> • An arc intercepted by a central angle has the same measure as the central angle.

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Sector	A sector of a circle is formed by two radii of the circle and the arc they intercept.	
Compass	Instrument used to draw circles and arcs.	
Theorem	A statement to be proven.	<ul style="list-style-type: none"> • Theorems consists of two parts: the hypothesis and the conclusion. The hypothesis part tells what is given. The conclusion part states what is to be proven. • Theorems are written in one of two forms: <ol style="list-style-type: none"> 1. As a complex sentence using an “if...then” structure. The “if” introduces the hypothesis. The “then” introduces the conclusion. 2. As a simple declarative sentence. For example: “Diameter of equal circles are equal”.
Problem	A problem in geometry is a construction to be made that satisfies certain given conditions.	
Propositions	Theorems and problems are often called propositions.	

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Quadrilateral	A 4 sided polygon	
Proof	The process of reasoning whereby the truth of a theorem or the correctness of a construction is established.	
Corollary	A corollary of a theorem is another theorem whose proof follows readily from the given theorem.	
Congruent figures	Two figures are congruent if they have the same size and shape. When overlaid the two figures match exactly.	
Corresponding parts	Corresponding parts of two congruent figures are those parts which coincide when the figures are placed one upon the other.	
Altitude of a triangle	An altitude of a triangle is the line segment drawn from a vertex to the opposite side and perpendicular to that side.	
Parallel lines	Parallel lines are lines that lie in the same plane and do not intersect however far they are extended	
Transversal	A transversal is a line cutting two or more lines.	
Exterior angle	An exterior angle of a polygon is an angle formed by one side of the polygon and the extension of the	

	adjacent side.	
Median of a triangle	A median of a triangle is a line segment drawn from a vertex to the midpoint of the opposite side.	
Regular polygon	A regular polygon is a polygon having all its sides equal and all its angles equal.	
Parallelogram	A parallelogram is a quadrilateral whose opposite sides are parallel.	
Rhombus	A rhombus is a parallelogram which has two adjacent sides equal.	
Rectangle	A rectangle is a parallelogram all of whose angles are right angles.	
Square	A square is a rectangle whose sides are all equal.	
Base and Altitude of a parallelogram	Any side of a parallelogram may be regarded as its base. The altitude of a parallelogram is the line segment drawn perpendicular to the base from any point on the opposite side.	

Trapezoid	A trapezoid is a quadrilateral that has two, and only two, of its sides parallel.	<ul style="list-style-type: none"> • The bases of a trapezoid are the two parallel sides. • The legs of a trapezoid are the two nonparallel sides. • The median of a trapezoid is the line segment joining the midpoints of the legs. • An isosceles trapezoid is a trapezoid whose legs are equal. • The altitude of a trapezoid is the line segment that is perpendicular to both its bases.
Minor Arc	A minor arc of a circle is the arc that is less than a semicircle.	
Major Arc	A major arc of a circle is the arc that is greater than a semicircle.	
Central Angle	A central angle of a circle is formed by two radii drawn to the end points of an arc of the circle.	<ul style="list-style-type: none"> • A central angle has the same measure as the arc it intercepts.
Chord	A chord of a circle is the line segment that connects the two end points of an arc of the circle.	
Inscribed polygon	A polygon is inscribed in a circle when the sides of the polygon are chords of the circle. The circle is then said to be circumscribed about the polygon.	

Midpoint of an arc	The midpoint of an arc is the point that divides the arc into two equal arcs.	
Center of an arc	The center of an arc is the center of the circle of which the arc is a part.	
Tangent	<p>A tangent to a circle is a straight line that has one, and only one point in common with the circle.</p> <p>The common point that is shared between the line and the circle is called the point of contact or the point of tangency.</p>	
Circumscribed polygon	A polygon is circumscribed about a circle when the sides of the polygon are tangent to the circle. The circle is then inscribed in the polygon.	
Secant	A secant is a straight line that cuts a circle in two points.	<ul style="list-style-type: none"> • The length of a secant from an external point to a circle is the length of the line segment from the external point to the farther point of intersection.
Chord of Contact	The line segment joining the points of contact of two tangents drawn from an external point is called the chord of contact of the two tangents.	