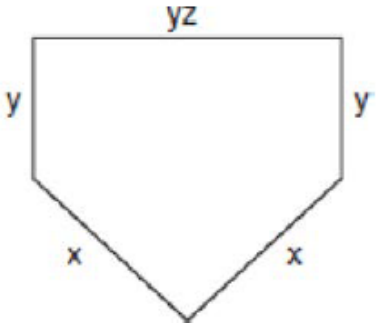
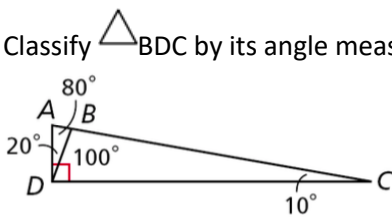




Geometry Essential Skills for the Scholar

Skill	Resource	Sample
<u>Algebra:</u> PEMDAS, Factoring, Finding Greatest Common Factor, Converting Fractions to Decimals, Substituting Values, Solving One-Step, Multi-Step Equations, Solving Proportions, Simplifying Radicals, Rounding decimals,	Math-Aids.com Kuta Software YouTube.com KhanAcademy.org MathIsFun.com desmos.com/geometry	(Question): Solve for the missing variable below. $51 = 7(-1 + 2v) + 2$
<u>Geometric Figures:</u> Vocabulary (e.g. polygon, cube), Name Them, Draw Them, Properties, Compare and Contrast Them,	<p style="text-align: center;"> https://www.toppr.com/guides/maths/basic-geometrical-ideas/basic-geometrical-shapes/ https://www.desmos.com/geometry https://teacher.desmos.com/activitybuilder/custom/5c8072da592b4757c700ad09 </p>	(Question): Write the expression that represents the perimeter (sum of the lengths) of the home plate. 
<u>Angles:</u> Vocabulary (e.g. ray, line segment, vertex), Naming (3 letters), Classify, Measure, Relationships (e.g. complementary, supplementary angles),	<p style="text-align: center;"> https://www.mathsisfun.com/angles.html https://teacher.desmos.com/activitybuilder/custom/58be122bd0fcfe089ac69eee </p>	(Question): Classify $\triangle BDC$ by its angle measures. 

Skill	Resource	Sample
<u>Graphing</u> In The Coordinate Plane: Use Ordered Pairs (x, y), Positive and Negative Integers, Determining Coordinates, Identify Quadrants, Identifying Slope, Finding Slope,	https://www.mathsisfun.com/data/cartesian-coordinates-interactive.html https://www.desmos.com/calculator/iovafzic0v	(Question): Graph the equation of the line below finding the slope and point. $y + 2 = 4(x + 1)$ slope: y-intercept: What polygon is shown in the coordinates below: A(-4,-4), B(4,-4) C(4,4) D(-4,4) Graph and determine the quadrants of each point.
<u>Determine and Apply Formulas:</u> Vocabulary (e.g. base, height, radius), Units of Measurement (ozs, lbs, in, ft, yds), Naming 3-D Figures, Perimeter, Area, Volume, Pythagorean Theorem, Finding Slope,	https://www.varsitytutors.com/hotmath/hotmath_help/topics/perimeter-area-volume	(Question): If the radius of a circle is 2.6 inches, find both the circumference (perimeter), and area.

Pre-Requisite Skills

Algebra Review

- Ratios and Proportions
- Scale Drawings: Word Problems
- Properties of Exponents
- Simplify radical Expressions
- Translating variable expressions and equations
- Slopes of Lines
- Equations of lines
- Solve linear equations
- Graph of Linear Equations
- Solve systems of Linear equations
- Solve quadratic equations by factoring
- Solve quadratic equations using the quadratic formula
- Classify Triangles: Equilateral, scalene, Isosceles
- Basic Pythagorean Theorem
- Circles: Area, Perimeter, Circumference
- Percentage
- Basic Measurements: Converting customary units, metric units
- Surface Area and Volume of Regular polygons

Geometry Basics:

- Points, lines, line segment and ray vocabulary
- Properties of points, lines and planes
- Intersections in a plane
- Length of Segments on a number line
- Additive Property of Lengths
- Midpoint
- Congruent line segments
- Perpendicular Bisector Theorem
- Distance Formula
- Angle Vocabulary
- Angle measures
- Identify complementary, supplementary, vertical and adjacent angles
- Angle bisector
- Basic Geometry Construction: Perpendicular bisector of a segment, angle bisector, congruent angle
- Congruence Proofs
- Similarity Proofs
- Basic transformations
- Circle relationships
- Areas and volumes
- 2D Surface Areas