

## Math DesCartes: Concepts and Principles of Geometry

### Skills: 2- and 3-D Identification and Classification

Students:	DesCartes Skills: <small>(Highlight the skills related to your chosen standard/concept)</small>
	<b>RIT Above 270:</b> <ul style="list-style-type: none"> <li>Identifies the number of diagonals of regular polygons using the formula</li> </ul>
	<b>RIT 261-270:</b> <ul style="list-style-type: none"> <li>Identifies the number of diagonals of regular polygons using the formula</li> </ul>
	<b>RIT 251-260:</b> <ul style="list-style-type: none"> <li>Identifies and names a rhombus</li> <li>Classifies polygons by properties</li> <li>Uses sums of interior/exterior angles to identify polygons</li> <li>Uses number of sides to find angle measures of polygons</li> <li>Classifies right triangles by defining properties</li> <li>Recognizes that the sum of the measures of 2 sides of a triangle must be greater than the measure of the 3<sup>rd</sup> side</li> <li>Recognizes and uses medians in triangles</li> <li>Recognizes the exterior angle relationships of triangles</li> <li>Solves problems involving properties of triangles</li> <li>Uses properties of angles and figures to solve algebraic problems</li> </ul>
	<b>RIT 241-250:</b> <ul style="list-style-type: none"> <li>Identifies and names a rhombus</li> <li>Classifies right triangles by defining properties</li> <li>Recognizes that the sum of the measures of 2 sides of a triangle must be greater than the measure of the 3<sup>rd</sup> side</li> <li>Recognizes the exterior angle relationships of triangles</li> <li>Uses properties of angles and figures to solve algebraic problems</li> </ul>
	<b>RIT 231-240:</b> <ul style="list-style-type: none"> <li>Identifies properties of circles</li> <li>Compares polygons by properties</li> <li>Classifies square pyramids by their properties (e.g., base shape, lateral surface shape, vertices)</li> <li>Classifies rectangular pyramids by their properties (e.g., base shape, lateral surface shape, vertices)</li> <li>Classifies isosceles triangles</li> <li>Classifies scalene triangles</li> <li>Identifies, compares, and defines parts of a right triangle (legs, hypotenuse, angles)</li> <li>Recognizes the interior angle relationships of triangles</li> </ul>
	<b>RIT 221-230:</b> <ul style="list-style-type: none"> <li>Identifies and names a quadrilateral</li> <li>Identifies and names a trapezoid</li> <li>Identifies the radius of a circle</li> <li>Identifies the diameter of a circle</li> <li>Identifies the number of degrees in a circle</li> <li>Identifies the circumference of circle</li> <li>Identifies the number of diagonals of regular polygons</li> <li>Identifies properties of quadrilaterals</li> <li>Classifies figures by type of angle</li> <li>Compares polygons by properties</li> <li>Identifies the number of edges on solid figures</li> <li>Classifies equilateral triangles</li> <li>Recognizes the interior angle relationships of triangles</li> </ul>
	<b>RIT 211-220:</b> <ul style="list-style-type: none"> <li>Identifies and names a quadrilateral</li> <li>Identifies the diameter of a circle</li> <li>Identifies the number of degrees in a circle</li> <li>Identifies the circumference of circle</li> <li>Identifies altitudes of polygons (not triangles)</li> </ul>

	<ul style="list-style-type: none"> <li>Classifies figures by type of angle</li> <li>Classifies figures by number of sides</li> <li>Predicts and verifies the effects of combining or subdividing basic shapes</li> <li>Identifies and names a rectangular prism</li> <li>Identifies edges and corners (vertices) of solid figures</li> <li>Classifies triangular prisms by their properties (e.g., base shape, lateral surface shape, vertices)</li> <li>Compares simple plane figures to solid figures (e.g., circle/sphere, square/cube, rectangle/rectangular solid)</li> <li>Recognizes the 3-D figure represented by a two-dimensional drawing</li> </ul>
	<b>RIT 201-210:</b> <ul style="list-style-type: none"> <li>Identifies and names a polygon</li> <li>Identifies and names a parallelogram</li> <li>Identifies and names a hexagon</li> <li>Identifies and names an octagon</li> <li>Classifies figures by sides and angles</li> <li>Identifies and names a cylinder</li> <li>Classifies cubes by their properties (e.g., edges with equal lengths, faces with equal areas and congruent shapes, right angle corners)</li> <li>Classifies cylinders by their properties (e.g., base shape, lateral surface shape, vertices)</li> <li>Recognize nets for 3-D objects such as prisms, pyramids, cylinders, and cones</li> </ul>
	<b>RIT 191-200:</b> <ul style="list-style-type: none"> <li>Identifies and names a polygon</li> <li>Identifies and names a pentagon</li> <li>Identifies diagonals of a figure</li> <li>Identifies points on a figure</li> <li>Sorts 2-D shapes and objects according to their attributes</li> <li>Creates patterns by putting different shapes together and taking them apart</li> <li>Analyzes position of shapes (e.g., inside, outside, between)</li> <li>Identifies and names a cylinder</li> <li>Identifies and names a sphere</li> <li>Identifies the number of faces on solid figures</li> </ul>
	<b>RIT 181-190:</b> <ul style="list-style-type: none"> <li>Identifies and names multiple shapes (e.g., square, rectangle, triangle, circle)</li> <li>Classifies figures by sides and corners</li> <li>Identifies and names a cube</li> <li>Identifies and names a sphere</li> </ul>
	<b>RIT 171-180:</b> <ul style="list-style-type: none"> <li>Recognizes geometric shapes in real-world objects</li> <li>Identifies and names a circle</li> <li>Identifies and names a triangle</li> <li>Identifies and names a square</li> <li>Identifies and names a rectangle</li> <li>Identifies spatial sense concepts (e.g., inside, between, over, under, above, below, behind, in front, middle)</li> <li>Identifies and names a cube</li> </ul>
	<b>RIT 161-170:</b> <ul style="list-style-type: none"> <li>Identifies and names a circle</li> <li>Identifies and names a triangle</li> <li>Identifies and names a square</li> <li>Identifies and names a rectangle</li> <li>Identifies sides and corners of geometric figures</li> <li>Compares open and closed figures</li> <li>Identifies and names a cone</li> <li>Identifies bases of a cylinder</li> <li>Sorts solid figures and objects according to attributes</li> </ul>

# Math DesCartes: Concepts and Principles of Geometry

Skills: 2- and 3-D Identification and Classification

**Lesson Title:**

**Standard/Concept for All:**

**For Students Ready for a Challenge:**

Lesson/Activity:

Resources:

Means of Assessment:

**For Most Students:**

Lesson/Activity:

Resources:

Means of Assessment:

**For Students Needing Extra Support:**

Lesson/Activity:

Resources:

Means of Assessment:

**Closure/Summary for All:**