

# Math: Geometry: Reason with Shapes, Attributes & Coordinate Plane

## Students: DesCartes Statements:

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| <b>Students:</b> | <b>RIT Above 240:</b> <ul style="list-style-type: none"><li>• Classifies polygons by properties</li><li>• Determines the distance between two points</li><li>• Uses picture representations to identify symmetry of plane figures with respect to a point or line</li></ul> |
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| <b>Students:</b> | <b>RIT 231-240:</b> <ul style="list-style-type: none"><li>• Classifies isosceles triangles</li><li>• Classifies scalene triangles</li><li>• Compares polygons by properties</li><li>• Determines which lines are perpendicular (analysis)</li><li>• Identifies properties of circles</li><li>• Identifies properties of quadrilaterals</li><li>• Recognizes the interior angle relationships of triangles</li></ul> |
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| <b>Students:</b> | <b>RIT 221-230:</b> <ul style="list-style-type: none"><li>• Classifies equilateral triangles</li><li>• Classifies polygons by type of angle</li><li>• Compares polygons by properties</li><li>• Determines coordinates of geometric figures in the first quadrant</li><li>• Determines which lines are perpendicular (analysis)</li><li>• Identifies acute angles</li><li>• Identifies and names a quadrilateral</li><li>• Identifies and names a rhombus</li><li>• Identifies properties of quadrilaterals</li><li>• Identifies rays</li><li>• Identifies the number of edges on rectangular prisms</li><li>• Recognizes the interior angle relationships of triangles</li></ul> |
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| <b>Students:</b> | <b>RIT 211-220:</b> <ul style="list-style-type: none"><li>• Classifies polygons by type of angle</li><li>• Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system</li><li>• Identifies acute angles</li><li>• Identifies and names a quadrilateral</li><li>• Identifies and names a rhombus</li><li>• Identifies and names a trapezoid</li><li>• Identifies corners (vertices) of cubes</li><li>• Identifies obtuse angles</li><li>• Identifies perpendicular lines</li><li>• Identifies rays</li><li>• Identifies the number of edges on rectangular prisms</li><li>• Locates the origin on a coordinate grid</li><li>• Predicts and verifies the effects of combining or subdividing basic shapes</li></ul> |
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| <b>Students:</b> | <b>RIT 201-210:</b> <ul style="list-style-type: none"><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 plane figures by the number of lines of symmetry</li><li>• Classifies polygons by number of sides</li><li>• Classifies polygons by sides and angles</li><li>• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)</li><li>• Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system</li><li>• Determines the distance between points, following grid lines, in the first quadrant on a coordinate graph (as in city blocks)</li><li>• Graphs ordered pairs in the first quadrant</li><li>• Identifies and names a cylinder, a hexagon, a parallelogram, a trapezoid</li><li>• Identifies corners (vertices) of cubes</li><li>• Identifies parallel lines</li><li>• Locates the origin on a coordinate grid</li><li>• Uses models to compare angles relative to right angles</li></ul> |
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**Students:****RIT 191-200:**

- Creates a new shape by combining different shapes, or identifies the different shapes that were used to make the original shape
- Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)
- Identifies and names a cylinder
- Identifies and names a sphere
- Identifies corners (vertices) of cubes
- Identifies lines
- Identifies parallel lines
- Identifies plane figures with line symmetry
- Identifies right angles
- Identifies the number of faces on rectangular prisms
- Identifies the number of lines of symmetry in plane figures
- Sorts 2-D shapes and objects according to their attributes
- Uses models to compare angles relative to right angles

**Students:****RIT 181-190:**

- Classifies polygons by sides and vertices
- Identifies and names a cube
- Identifies and names a sphere
- Identifies equal parts by using models
- Identifies plane figures with line symmetry

**Students:****RIT 171-180:**

- Identifies and names a cube
- Identifies and names a square
- Identifies and names a triangle
- Recognizes geometric shapes in real-world objects

**Students:****RIT 161-170:**

- Compares open and closed figures
- Identifies and names a cone
- Identifies and names a rectangle
- Identifies and names a square
- Identifies and names a triangle
- Identifies position of shapes (e.g., inside, outside, between)
- Identifies sides and vertices of polygons
- Sorts solid figures and objects according to attributes

**Students:****RIT Below 161:**

- Identifies and names a circle
- Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)