

Math ISAT: Concepts and Principles of Geometry

Skills: 2- and 3-D Identification and Classification

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| Students: | RIT Above 270: <ul style="list-style-type: none">Identifies the number of diagonals of regular polygons using the formula |
| Students: | RIT 261-270: <ul style="list-style-type: none">Identifies the number of diagonals of regular polygons using the formula |
| Students: | RIT 251-260: <ul style="list-style-type: none">Identifies and names a rhombusClassifies polygons by propertiesUses sums of interior/exterior angles to identify polygonsUses number of sides to find angle measures of polygonsClassifies right triangles by defining propertiesRecognizes that the sum of the measures of 2 sides of a triangle must be greater than the measure of the 3rd sideRecognizes and uses medians in trianglesRecognizes the exterior angle relationships of trianglesSolves problems involving properties of trianglesUses properties of angles and figures to solve algebraic problems |
| Students: | RIT 241-250: <ul style="list-style-type: none">Identifies and names a rhombusClassifies right triangles by defining propertiesRecognizes that the sum of the measures of 2 sides of a triangle must be greater than the measure of the 3rd sideRecognizes the exterior angle relationships of trianglesUses properties of angles and figures to solve algebraic problems |
| Students: | RIT 231-240: <ul style="list-style-type: none">Identifies properties of circlesCompares polygons by propertiesClassifies square pyramids by their properties (e.g., base shape, lateral surface shape, vertices)Classifies rectangular pyramids by their properties (e.g., base shape, lateral surface shape, vertices)Classifies isosceles trianglesClassifies scalene trianglesIdentifies, compares, and defines parts of a right triangle (legs, hypotenuse, angles)Recognizes the interior angle relationships of triangles |
| Students: | RIT 221-230: <ul style="list-style-type: none">Identifies and names a quadrilateralIdentifies and names a trapezoidIdentifies the radius of a circleIdentifies the diameter of a circleIdentifies the number of degrees in a circleIdentifies the circumference of circleIdentifies the number of diagonals of regular polygonsIdentifies properties of quadrilateralsClassifies figures by type of angleCompares polygons by propertiesIdentifies the number of edges on solid figuresClassifies equilateral trianglesRecognizes the interior angle relationships of triangles |
| Students: | RIT 211-220: <ul style="list-style-type: none">Identifies and names a quadrilateralIdentifies the diameter of a circleIdentifies the number of degrees in a circleIdentifies the circumference of circleIdentifies altitudes of polygons (not triangles)Classifies figures by type of angleClassifies figures by number of sidesPredicts and verifies the effects of combining or subdividing basic shapesIdentifies and names a rectangular prismIdentifies edges and corners (vertices) of solid figuresClassifies triangular prisms by their properties (e.g., base shape, lateral surface shape, vertices)Compares simple plane figures to solid figures (e.g., circle/sphere, square/cube, rectangle/rectangular solid)Recognizes the 3-D figure represented by a two-dimensional drawing |

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Skills: 2- and 3-D Identification and Classification

Students:

RIT 201-210:

- Identifies and names a polygon
- Identifies and names a parallelogram
- Identifies and names a hexagon
- Identifies and names a octagon
- Classifies figures by sides and angles
- Identifies and names a cylinder
- Classifies cubes by their properties (e.g., edges with equal lengths, faces with equal areas and congruent shapes, right angle corners)
- Classifies cylinders by their properties (e.g., base shape, lateral surface shape, vertices)
- Recognize nets for 3-D objects such as prisms, pyramids, cylinders, and cones

Students:

RIT 191-200:

- Identifies and names a polygon
- Identifies and names a pentagon
- Identifies diagonals of a figure
- Identifies points on a figure
- Sorts 2-D shapes and objects according to their attributes
- Creates patterns by putting different shapes together and taking them apart
- Analyzes position of shapes (e.g., inside, outside, between)
- Identifies and names a cylinder
- Identifies and names a sphere
- Identifies the number of faces on solid figures

Students:

RIT 181-190:

- Identifies and names multiple shapes (e.g., square, rectangle, triangle, circle)
- Classifies figures by sides and corners
- Identifies and names a cube
- Identifies and names a sphere

Students:

RIT 171-180:

- Recognizes geometric shapes in real-world objects
- Identifies and names a circle
- Identifies and names a triangle
- Identifies and names a square
- Identifies and names a rectangle
- Identifies spatial sense concepts (e.g., inside, between, over, under, above, below, behind, in front, middle)
- Identifies and names a cube

Students:

RIT 161-170:

- Identifies and names a circle
- Identifies and names a triangle
- Identifies and names a square
- Identifies and names a rectangle
- Identifies sides and corners of geometric figures
- Compares open and closed figures
- Identifies and names a cone
- Identifies bases of a cylinder
- Sorts solid figures and objects according to attributes

Students:

RIT Below 161:

- *No Skills Listed*