

Math 6+: Measurement

Perimeter, Area, Surface Area, and Volume

Area

Students	Learning Continuum Statements:
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Students:	RIT 161-170:
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- Compares areas of shapes
- Determines the area of figures composed of whole unit squares

Students:	RIT 171-180:
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- Compares areas of shapes
- Determines the area of figures composed of whole unit squares
- Represents the area of rectangles composed of whole unit squares using multiplication expressions or equations

Students:	RIT 181-190:
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- Compares areas of shapes
- Determines the area of figures composed of whole unit squares
- Represents the area of rectangles composed of whole unit squares using multiplication expressions or equations

Students:	RIT 191-200:
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- Determines the area of figures composed of whole unit squares
- Determines the area of rectangles with whole-number sides, given the formula
- Estimates the area of figures using square units
- Represents the area of rectangles composed of whole unit squares using multiplication expressions or equations

Students:	RIT 201-210:
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- Determines side lengths given the area of rectangles
- Determines the area of figures composed of whole and partial unit squares
- Determines the area of rectangles with whole-number sides, formula not provided
- Determines the area of rectangles with whole-number sides, given the formula
- Identifies a unit square
- Recognizes situations which describe area
- Represents the area of rectangles composed of whole unit squares using repeated addition expressions or equations
- Solves problems involving areas of rectangles within a real-world or mathematical context

Students:**RIT 211-220:**

- Applies the distributive property of multiplication to find the area of rectangles with whole-number sides
- Determines side lengths given the area of rectangles
- Determines the area of figures composed of whole and partial unit squares
- Determines the area of parallelograms, formula not provided
- Determines the area of rectangles with decimal sides, formula not provided
- Determines the area of rectangles with decimal sides, given the formula
- Determines the area of rectangles with fractional sides, formula not provided
- Determines the area of rectangles with whole-number sides, formula not provided
- Determines the area of rectangles with whole-number sides, given the formula
- Recognizes situations which describe area
- Solves problems involving areas of rectangles within a real-world or mathematical context
- Solves problems involving the area of figures composed of whole unit squares

Students:**RIT 221-230:**

- Applies the distributive property of multiplication to find the area of rectangles with whole-number sides
- Describes the effect on area when dimensions of a rectangle are changed
- Describes the effect on area when dimensions of a triangle are changed
- Determines side lengths given the area of rectangles
- Determines the area of parallelograms, formula not provided
- Determines the area of parallelograms, given the formula
- Determines the area of rectangles with decimal sides, formula not provided
- Determines the area of rectangles with fractional sides, formula not provided
- Determines the area of rectangles with whole-number sides, formula not provided
- Determines the area of rectangles with whole-number sides, given the formula
- Determines the area of regular hexagons, given the formula
- Determines the area of triangles, given the formula
- Solves problems involving areas of figures composed of polygons within a real-world or mathematical context
- Solves problems involving areas of rectangles within a real-world or mathematical context
- Solves problems involving both area and perimeter of rectangles within a real-world or mathematical context

Students:**RIT 231-240:**

- Applies the distributive property of multiplication to find the area of rectangles with whole-number sides
- Describes the effect on area when dimensions of a rectangle are changed
- Describes the effect on area when dimensions of a triangle are changed
- Determines the area of circles, given the formula
- Determines the area of figures composed of polygons
- Determines the area of figures composed of rectangles
- Determines the area of parallelograms, formula not provided
- Determines the area of rectangles given the perimeter
- Determines the area of rectangles with decimal sides, formula not provided
- Determines the area of rectangles with fractional sides, formula not provided
- Determines the area of rectangles with whole-number sides, formula not provided

- Determines the area of trapezoids, given the formula
- Determines the area of triangles, formula not provided
- Determines the area of triangles, given the formula
- Determines the circumference given the area of a circle
- Determines the perimeter of rectangles given the area
- Determines the ratio between areas of scaled figures
- Estimates the area of rectangles with whole-number sides, formula not provided
- Identifies the formula for the area of a circle
- Solves problems involving areas of figures composed of polygons within a real-world or mathematical context
- Solves problems involving areas of rectangles within a real-world or mathematical context
- Solves problems involving both area and perimeter of rectangles within a real-world or mathematical context

Students:

RIT 241-250:

- Describes the effect on area when dimensions of a rectangle are changed
- Describes the effect on area when dimensions of a triangle are changed
- Determines the area of circles, formula not provided
- Determines the area of figures composed of polygons
- Determines the area of figures composed of polygons and circles
- Determines the area of parallelograms, formula not provided
- Determines the area of quarter circles, semicircles, or three-quarter circles
- Determines the area of rectangles given the perimeter
- Determines the area of rectangles with decimal sides, formula not provided
- Determines the area of rectangles with fractional sides, formula not provided
- Determines the area of trapezoids, formula not provided
- Determines the area of triangles, formula not provided
- Determines the area of triangles, given the formula
- Determines the circumference given the area of a circle
- Determines the perimeter of rectangles given the area
- Determines the radius or diameter given the area of a circle
- Determines the ratio between areas of scaled figures
- Solves area word problems involving tiling rectangles using unit squares with decimal side lengths
- Solves area word problems involving whole numbers and tiling rectangles with non-unit squares
- Solves problems involving areas of figures composed of polygons within a real-world or mathematical context
- Solves problems involving areas of polygons and circles, quarter circles, semicircles, or three-quarter circles within a real-world or mathematical context
- Solves problems involving both area and perimeter of rectangles within a real-world or mathematical context

Students:

RIT 251-260:

- Describes the effect on area when dimensions of a rectangle are changed
- Describes the effect on area when dimensions of a triangle are changed
- Describes the effect on area when the perimeter of a rectangle is changed
- Describes the effect on area when the radius or diameter of a circle is changed
- Determines the area of circles, formula not provided

- Determines the area of figures composed of polygons
- Determines the area of figures composed of polygons and circles
- Determines the area of parallelograms, formula not provided
- Determines the area of quarter circles, semicircles, or three-quarter circles
- Determines the area of regular hexagons, formula not provided
- Determines the area of trapezoids, formula not provided
- Determines the area of triangles, formula not provided
- Determines the circumference given the area of a circle
- Determines the height, given the area and the sum of the bases of a trapezoid
- Determines the perimeter of rectangles given the area
- Determines the ratio between areas of scaled figures
- Solves area word problems involving whole numbers and tiling rectangles with non-unit squares
- Solves problems involving areas of figures composed of polygons within a real-world or mathematical context
- Solves problems involving areas of polygons and circles, quarter circles, semicircles, or three-quarter circles within a real-world or mathematical context

Students:

RIT 261-270:

- Describes the effect on area when dimensions of a hexagon are changed
- Describes the effect on area when dimensions of a rhombus are changed
- Describes the effect on area when the circumference of a circle is changed
- Describes the effect on area when the radius or diameter of a circle is changed
- Determines the area of figures composed of polygons and circles
- Determines the area of kites, formula not provided
- Determines the ratio between areas of scaled figures
- Solves problems involving areas of figures composed of polygons within a real-world or mathematical context

Students:

RIT 271-280:

- *No Skills Listed*

Students:

RIT 281-290:

- Solves problems involving areas of circles within a real-world or mathematical context