Math 6+: Geometry
Spatial Reasoning, Similarity, Congruence, and Scale Factors

Similarity

Students	Learning Continuum Statements:
Students:	**RIT 171-180:** • Identifies similar figures
Students:	**RIT 181-190:** • Identifies similar figures
Students:	**RIT 191-200:** • *No Skills Listed*
Students:	**RIT 201-210:** • Applies scale factors to solve problems involving scale drawings, maps, and models
Students:	**RIT 211-220:** • Applies properties of similar triangles to solve real-world problems involving indirect measurements • Applies scale factors to solve problems involving scale drawings, maps, and models • Determines lengths of corresponding sides in similar figures • Determines scale factors in problems involving scale drawings, maps, and models • Identifies corresponding sides and angles in similar figures • Knows the definition of similarity
Students:	**RIT 221-230:** • Applies properties of similar triangles to solve real-world problems involving indirect measurements • Applies scale factors to solve problems involving scale drawings of geometric figures • Applies scale factors to solve problems involving scale drawings, maps, and models • Determines lengths of corresponding sides in 3-D similar figures • Determines lengths of corresponding sides in similar figures • Determines scale factors in problems involving scale drawings of geometric figures • Determines the ratio between perimeters of similar figures • Identifies corresponding sides and angles in similar figures

Students:	**RIT 231-240:** • Applies properties of similar figures to determine a perimeter • Applies properties of similar figures to determine an area • Applies properties of similar triangles to solve real-world problems involving indirect measurements • Applies scale factors to solve problems involving scale drawings of geometric figures • Applies scale factors to solve problems involving scale drawings, maps, and models • Determines lengths of corresponding sides in similar figures • Determines scale factors in problems involving scale drawings of geometric figures • Identifies similar triangles using SAS or SSS • Identifies the proportion of corresponding sides of similar figures
Students:	**RIT 241-250:** • Applies properties of similar figures to determine a perimeter • Applies properties of similar triangles to solve real-world problems involving indirect measurements • Applies scale factors to solve problems involving scale drawings of geometric figures • Applies scale factors to solve problems involving scale drawings, maps, and models • Applies similarity postulates to identify corresponding sides and angles • Applies similarity postulates to solve for missing lengths and angles • Determines lengths of corresponding sides in similar figures • Identifies similar triangles using SAS or SSS
Students:	**RIT 251-260:** • Applies properties of similar figures to determine a perimeter • Applies scale factors to solve problems involving scale drawings of geometric figures • Applies scale factors to solve problems involving scale drawings, maps, and models • Applies similarity postulates to solve for missing lengths and angles • Applies the geometric mean to solve for missing lengths and angles in triangles • Applies the segment proportionality property for parallel lines • Applies the Triangle Proportionality Theorem • Determines lengths of corresponding sides in similar figures • Identifies similar triangles using AA • Identifies similar triangles using SAS or SSS
Students:	**RIT 261-270:** • Applies similarity postulates to solve for missing lengths and angles • Applies the geometric mean to solve for missing lengths and angles in triangles • Applies the Triangle Proportionality Theorem • Determines the conditions necessary to prove two triangles are similar • Identifies the similarity postulate that proves two triangles are similar

Students:	**RIT 271-280:** • Applies the geometric mean to solve for missing lengths and angles in triangles • Determines the conditions necessary to prove two triangles are similar • Determines the ratio between surface areas of similar 3-D figures • Identifies the similarity postulate that proves two triangles are similar
Students:	**RIT 281-290:** • Applies the scale factor in similar 3-D figures to determine area of a face, perimeter of a face, circumference of a face, volume, or surface area • Determines the ratio between areas of similar figures • Solves problems involving multiple theorems of similar triangles, including the Triangle Proportionality Theorem, segment proportionality property for parallel lines, and similarity postulates