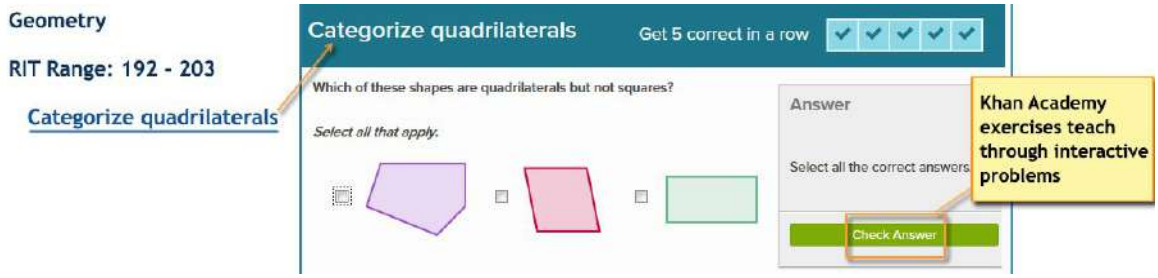
NWEA
Northwest Evaluation Association

MAP to Khan Academy:

Khan Academy Practice Exercises Correlated to RIT for Common Core Math MAP Grades 6+

About this Document

This document correlates MAP® sub-goals and RIT ranges to Khan Academy® exercises. The Khan exercises are interactive problems for students with instant feedback:



Having these exercises correlated to RIT ranges means you can use them in conjunction with your flexible student groupings that are also informed by RIT score results. The exercises are also useful for targeting learning in each student's zone of proximal development (Vygotsky).

The correlation between MAP RIT scores and the Khan Academy exercises was determined by using our 2011 norms data to approximate grade levels, which were then matched to the corresponding Common Core State Standards (CCSS). Teachers in states that have not adopted the CCSS may still find these resources valuable by relating goals or sub-goals that are similar to CCSS goals and sub-goals.

NWEA plans to work with Khan Academy to update these links twice a year as new exercises are developed.

How to Use

1. Use MAP reports to find the RIT scores for a given sub-goal.
2. In this document, locate that same goal, approximate RIT range, and sub-goals.
3. To choose appropriate Khan Academy exercises:
    a. Consider both the name of the exercise and the CCSS standard.
    b. Click the link and try the exercise yourself.
    Note: When you're in Khan Academy, the links to videos and other resources add context to the actual exercise but are not necessarily correlated to MAP.
4. In the browser window where the exercise opened, note or copy the Web address URL.
5. Optionally deliver exercises to students. For example:
    - Paste the URL into an online document for students to access.
    - Present the exercise in the classroom.
    - Use for parent-teacher conference discussion.

Limitations

The instructional suggestions presented in this document are intended to provide supplementary resources based on available Khan Academy exercises and are not intended to replace other options. MAP/MPG data should be used as one of many data points for instructional decisions rather than as a placement guide.

Terms of Use

Common Core MAP Mathematics
Khan Academy Practice Exercises Correlation
Common Core Mathematics 6+

Geometry

Congruence, Similarity, Right Triangles, & Trig

	Standards Alignment
RIT Range: 204 - 212	
Quadrilateral types	4.G.A.2
RIT Range: 203-212	
Draw and identify lines of symmetry. Create and identify symmetrical shapes.	4.G.A.3
Practice drawing lines of symmetry and creating symmetrical figures.	4.G.A.3
RIT Range: 226 - 230	
Vertical angles	7.G.B.5
RIT Range: 228-230	
Use your knowledge about angles to find missing angle measures in various situations.	8.G.A.5
Use your knowledge about angles to find missing angle measures in various complex situations.	8.G.A.5
Use the Pythagorean theorem to find the distance between two points on the coordinate plane.	8.G.B.8
Given two polygons, try to map one onto the other using angle-preserving transformations, and determine whether they are similar. Transformations are done in "intuitive mode."	8.G.A.4 | HSG-SRT.A.2
Given a pair of figures in the coordinate plane, try to map one onto the other and determine whether they are congruent.	8.G.A.2 | HSG-CO.B.6
Find missing angles given two parallel lines and a transversal.	8.G.A.5
Equation practice with congruent angles	8.G.A.5
Use the interactive transformation tool to perform reflections.	8.G.A.1 | 8.G.A.3 | HSG-CO.A.2 | HSG-CO.A.5
Use the interactive transformation tool to perform rotations.	8.G.A.1 | 8.G.A.3 | HSG-CO.A.2 | HSG-CO.A.5
Use the interactive transformation tool to perform translations.	8.G.A.1 | 8.G.A.3 | HSG-CO.A.2 | HSG-CO.A.5
Find the leg or hypotenuse of a right triangle using the Pythagorean theorem.	8.G.B.7
Pythagorean theorem in 3D	8.G.B.7
Solve real-world problems that can be modeled by right triangles, using the Pythagorean Theorem!	8.G.B.7
RIT Range: > 231	
Given a description of a sequence of transformations, determine whether it preserves segment length or angle measure.	HSG-CO.A.5

Geometry

Congruence, Similarity, Right Triangles, & Trig

Standards Alignment

RIT Range: > 231

Solve word problems by modeling real-world (and not-so-real) situations as right triangles and using trigonometry.	HSG-SRT.C.8
Use the triangle congruence criteria SSS, SAS, ASA, and AAS to determine that two triangles are congruent.	HSG-CO.C.10 | HSG-CO.C.11 | HSG-CO.C.9
Given two triangles, determine whether they are congruent and use that to find missing angle measures.	HSG-CO.C.10
Map a given shape to another one using rigid transformations and dilations. Determine whether the shapes are congruent.	HSG-CO.B.6
Find both the center and the scale factor of a dilation that maps a given figure to another one.	HSG-SRT.A.1
Given two figures on the coordinate plane, find the formal definition of the reflection that takes one figure to another.	HSG-CO.A.2 | HSG-CO.A.5
Given a figure on the coordinate plane and a center of a rotation, find the angle for the rotation that maps one figure to the other.	HSG-CO.A.2 | HSG-CO.A.5
Given two polygons, try to map one onto the other using angle-preserving transformations, and determine whether they are similar. Transformations are done in "formal mode."	HSG-SRT.A.2
Given two figures on the coordinate plane, find the formal definition of the translation that takes one figure to another.	HSG-CO.A.2 | HSG-CO.A.5
Given a figure and a definition of a dilation, manually draw the image.	HSG-SRT.A.1
Given two polygons, try to map one onto the other using angle-preserving transformations, and determine whether they are similar. Transformations are done in "intuitive mode."	8.G.A.4 | HSG-SRT.A.2
Given a pair of figures in the coordinate plane, try to map one onto the other and determine whether they are congruent.	8.G.A.2 | HSG-CO.B.6
Find missing angles in isosceles triangles given just one angle.	HSG-CO.C.10
Geometric definitions	HSG-CO.A.1
Explore different ways of proving some theorems about lines and angles. Some transformations are used.	HSG-CO.C.9
Use the interactive transformation tool to perform dilations.	HSG-SRT.A.1
Use the interactive transformation tool to perform reflections.	8.G.A.1 | 8.G.A.3 | HSG-CO.A.2 | HSG-CO.A.5
Use the interactive transformation tool to perform rotations.	8.G.A.1 | 8.G.A.3 | HSG-CO.A.2 | HSG-CO.A.5
Use the interactive transformation tool to perform translations.	8.G.A.1 | 8.G.A.3 | HSG-CO.A.2 | HSG-CO.A.5
Use your knowledge of 30-60-90 and 45-45-90 triangles to solve some problems.	HSG-SRT.C.8
Given a description of the effect of a transformation, determine which rigid transformation it is.	HSG-CO.A.2 | HSG-CO.A.4
Understand the right triangle definition of sec, csc, and cot ratios.	HSG-SRT.C.6

Geometry

Congruence, Similarity, Right Triangles, & Trig

Standards Alignment

RIT Range: > 231

Given a figure and a definition of a reflection, manually draw the image.	HSG-CO.A.5
Find the reflection that maps a given figure to another and draw the image of a reflection. The lines of reflection in this exercise have a wide range of slopes.	HSG-CO.A.5
Given a figure on the coordinate plane and the definition of a rotation about the origin, manually draw the image of that rotation.	HSG-CO.A.5
Given a figure on the coordinate plane and the definition of a rotation about an arbitrary point, manually draw the image of that rotation.	HSG-CO.A.5
Given two triangles with some of their angle measures, determine whether the triangles are similar or not.	HSG-SRT.A.2 | HSG-SRT.A.3
Given two triangles with some of their side measures, determine whether the triangles are similar or not.	HSG-SRT.A.2 | HSG-SRT.A.3
Given two similar triangles and some of their side lengths, find a missing side length.	HSG-SRT.B.5
Given two similar triangles and some of their side lengths, find a missing side length.	HSG-SRT.B.5
Solve geometry problems with various polygons by using all you know about similarity and congruence.	HSG-SRT.B.5
Analyze various shapes according to their reflective and rotational symmetries.	HSG-CO.A.3
Given a figure and a definition of a translation, manually draw the image.	HSG-CO.A.5
Find missing angle measures in triangles using the properties of general triangles, isosceles triangles, and equilateral triangles.	HSG-CO.C.10
DEPRECATED Trigonometry 0.5	HSG-SRT.C.6
Given the side lengths of a right triangle, find the sine, cosine, or tangent of one of the acute angles.	HSG-SRT.C.6
DEPRECATED Trigonometry 1.5	HSG-SRT.C.6
Given one side length and an acute angle in a right triangle, find another side using trigonometry.	HSG-SRT.C.6

Geometry

Geometric Measurement and Relationships

Standards Alignment

RIT Range: < 160

Practice comparing shapes based on their number of sides, number of corners, and side-lengths.	K.G.B.4
Practice combining shapes to make other shapes.	K.G.B.6
Practice identifying circles, triangles, squares, and rectangles.	K.G.A.1

Geometry

Geometric Measurement and Relationships

	Standards Alignment
RIT Range: 161-178	
Practice identifying circles, triangles, squares, rectangles, rhombuses, trapezoids, and hexagons.	1.G.A.1
Compare the lengths of 2 objects indirectly by using a third object.	1.MD.A.1
Measure objects with same-size length units without gaps or overlaps.	1.MD.A.2
Practice ordering 3 objects by length.	1.MD.A.1
RIT Range: 179-191	
Estimating lengths	2.MD.A.3
RIT Range: 179-191	
Add and subtract lengths to solve word problems.	2.MD.B.5
Measure objects using a ruler.	2.MD.A.1
Practice identifying quadrilaterals, pentagons, hexagons, and octagons.	2.G.A.1
RIT Range: 192 - 203	
Decompose shapes to find area	3.MD.C.7
Finding area by multiplying	3.MD.C.7
RIT Range: 192-202	
Comparing areas by multiplying	3.MD.C.7b
RIT Range: 192-202	
Compare the areas and perimeters of rectangles when given a context or picture.	3.MD.D.8
Practice estimating the mass of real life objects using grams and kilograms.	3.MD.A.2
Practice estimating the volume of real life objects using milliliters and liters.	3.MD.A.2
Find a missing side length for a figure when given the perimeter.	3.MD.D.8
Practice finding the area of rectangles by counting unit square. Create rectangles with a given area by covering unit squares.	3.MD.C.6
Solve word problems involving mass. Estimate the mass of items.	3.MD.A.2
Practice measuring side lengths to find perimeter.	3.MD.D.8
Count unit squares and partial unit squares to find the area of shapes.	3.MD.C.6
Calculate the perimeter of a shape from its side lengths.	3.MD.D.8

Geometry

Geometric Measurement and Relationships

	Standards Alignment
RIT Range: 192-202	
Find perimeter of figures when given an image or context.	3.MD.D.8
Practice solving real world word problems involving perimeter.	3.MD.D.8
Compare the amount of unit squares that cover figures.	3.MD.C.5
Solve word problems involving volume. Estimate the volume of items.	3.MD.A.2
RIT Range: 203-212	
Determine if an angle is acute, right, or obtuse. A protractor is provided.	4.G.A.1
Find the area of rectangles and squares when given side lengths. Find the side length of a square when given the area.	4.MD.A.3
Find the missing side length of a rectangle when given its perimeter or area. Compare perimeters and areas of rectangles.	4.MD.A.3
Find the area of rectangles and squares when given side lengths. Find the side length of a square when given the area.	4.MD.A.3
Estimate the size of angles when given a picture or a situation.	4.MD.C.5
Classify shapes based on pictures or attributes, such as angle types and side-lengths.	4.G.A.2
Practice converting a US customary measure of volume to a smaller unit.	4.MD.A.1
Practice converting a metric measure of mass to a smaller unit.	4.MD.A.1
Practice converting a US customary measure of length to a smaller unit.	4.MD.A.1
Practice converting a metric measure of volume to a smaller unit.	4.MD.A.1
Practice converting a metric measure of length to a smaller unit.	4.MD.A.1
Practice converting a US customary measure of mass to a smaller unit.	4.MD.A.1
Find an angle's measure when given the measures of its parts.	4.MD.C.7
Use a protractor to construct angles.	4.MD.C.6
Draw rays, lines, and line segments with given points.	4.G.A.1
Practice drawing parallel and perpendicular lines, line segments, and ray.	4.G.A.1
Create an acute, right, or obtuse angle using a given vertex.	4.G.A.1
Practice estimating the length of real life objects using US customary units.	4.MD.A.1
Practice estimating the length of real life objects using metric units.	4.MD.A.1
Practice estimating the mass of real life objects using US customary units.	4.MD.A.1
Practice estimating the volume of real life objects using US customary	4.MD.A.1
Practice identifying triangles by their angles as acute, right, or obtuse.	4.G.A.2

Geometry

Geometric Measurement and Relationships

	Standards Alignment
RIT Range: 203-212	
Practice converting a measure of time to a smaller unit.	4.MD.A.1
Measure angles using a protractor.	4.MD.C.6
Solve word problems that involve converting between U.S. dollars and cents and converting U.S. dollars to other units of money, like pesos.	4.MD.A.2
Solve word problems to find what time an event occurred or how long an event lasted.	4.MD.A.2
Name angles by their vertex, endpoints, or labels.	4.MD.C.5
Identify quadrilaterals based on pictures or attributes. Quadrilaterals included are parallelograms, rhombuses, rectangles, and squares.	4.G.A.2
Determine if angles in shapes and pictures are acute, right, or obtuse.	4.G.A.1
Recognize rays, lines, and line segments in geometric figures.	4.G.A.1
Determine if angles in shapes and pictures are acute, right, or obtuse.	4.G.A.1
Recognize parallel and perpendicular lines in geometric figures and pictures.	4.G.A.1
Practice identifying triangles by their side-lengths as equilateral, isosceles, or scalene.	4.G.A.2
Practice estimating the length of an event using seconds, minutes, and hours.	4.MD.A.1
RIT Range: 213 - 220	
Converting measurements word problems	5.MD.A.1
Converting units	5.MD.A.1
RIT Range: 213-219	
Decompose figures to find volume	5.MD.C.5 | 5.MD.C.5c
Volume 1	5.MD.C.5 | 5.MD.C.5b
~~Volume w~~word problems	5.MD.C.5 | 5.MD.C.5b | 5.MD.C.5c
~~Volume with unit cubes 1~~	5.MD.C.4 | 5.MD.C.5
Volume formula intuition	5.MD.C.5
RIT Range: 213-219	
Find the distance between points, graph points, and interpret data on coordinate planes to solve word problems.	5.G.A.2
Graph and find the distance between point in first quadrant of coordinate plane.	5.G.A.2

Geometry

Geometric Measurement and Relationships

	Standards Alignment
RIT Range: 213-219	
Plot a given point on the coordinate plane.	5.G.A.2
Identify and compare shapes based on their attributes. Shapes include triangle types, quadrilateral types, pentagons, and hexagons.	5.G.B.3
Identify and graph corners on shapes graphed in the first quadrant of a coordinate plane.	5.G.A.2
Recognize volume as an attribute of solid figures and understand concepts of volume measurement.	5.MD.C.4
RIT Range: 220-223	
Practice finding the area of parallelograms given base and height.	6.G.A.1
Practice finding the area of right, acute, and obtuse triangles from a diagram.	6.G.A.1
Practice finding the areas of complex shapes that are composed of smaller shapes.	6.G.A.1
Practice finding the areas of triangles and quadrilaterals on grids.	6.G.A.1
Practice finding the areas of trapezoids.	6.G.A.1
Practice solving problems involving triangles, parallelograms, and composite figures. Exercises include decimals, fractions, and word problems. Area of circles is not included.	6.G.A.1
Practice drawing shapes on the coordinate plane.	6.G.A.3
More challenging problems involving drawing shapes on the coordinate plane.	6.G.A.3
Practice matching 2D nets to the 3D shapes the fold up into.	6.G.A.4
Challenge problems involving the coordinates of the vertices of the quadrilaterals	6.G.A.3
Practice using the net of a 3D figure to find surface area.	6.G.A.4
Practice finding the surface area of 3D objects.	6.G.A.4
Practice finding the volume of rectangular prisms that have fractional side lengths.	6.G.A.2
Practice solving volume word problems involving objects like fish tanks, truck beds, and refrigerators.	6.G.A.2

RIT Range: 224-227

Find the area of a circle given its radius, diameter, or circumference.	7.G.B.4
Practice interesting area and circumference problems.	7.G.B.4
Practice finding the area or circumference of part of a circle.	7.G.B.4

Geometry

Geometric Measurement and Relationships

Standards Alignment

RIT Range: 224-227

Use your knowledge about complementary and supplementary angles to find missing angles.	7.G.B.5
An urban planner needs your help in creating a scale drawing. Let's use our knowledge about scale factor, length, and area to assist.	7.G.A.1
Practice constructing triangles.	7.G.A.2
Practice using knowledge of vertical, complementary, and supplementary angles to find a missing angle.	7.G.B.5
Practice telling whether two angles are supplementary, complementary, or vertical.	7.G.B.5
Interpreting scale drawings	7.G.A.1
Find missing angle measures in quadrilaterals.	7.G.B.5
Practice finding the radius, diameter, or circumference of a circle. For example, if the diameter of a circle is 16, what is its circumference?	7.G.B.4
Find the areas of shaded regions which are combinations of squares, triangles, and circles.	7.G.B.6
Match 3D objects with their 2D cross-sections.	7.G.A.3
Practice setting up algebraic equations to solve unknown angle problems.	7.G.B.5
Given the lengths of two sides of a triangle, what can we say about the third side?	7.G.A.2
Use your knowledge about vertical angles to find missing angle measures.	7.G.B.5

RIT Range: 228-230

Find volumes and surface areas of boxes, cylinders, & triangular prisms.	8.G.C.9
Solve problems concerning real-world situations with the volumes of cones, cylinders, and spheres.	8.G.C.9 | HSG-GMD.A.3

RIT Range: > 231

Use the fact that the arc measures of a circle must sum to 360 degrees to find missing arc measures.	HSG-C.A.2
Use the fact that the arc measures of a circle must sum to 360 degrees to find missing arc measures by setting up equations.	HSG-C.A.2
Relate the area of a sector to the area of a whole circle.	HSG-C.B.5

Solve problems related to radians and arc length like finding an arc length given the central angle and radius.	HSG-C.B.5
Solve problems related to tangents of circles.	HSG-C.A.2 | HSG-C.A.3
Relate the length of an arc to the circumference of a whole circle and the central angle subtended by the arc.	HSG-C.B.5

Geometry

Geometric Measurement and Relationships

	Standards Alignment
RIT Range: > 231	
Given points that two lines go through or the graph of each line, classify the lines as parallel, perpendicular, or neither.	HSG-GPE.B.5
Solve all sorts of word problems with crazy contexts that use polygons on the coordinate plane.	HSG-GPE.B.7
Practice your knowledge of all possible cross-sections of common 3D objects.	HSG-GMD.B.4
Convert angle measures given in degrees to radians and vice versa.	HSG-C.B.5
Figure out the coordinates of a point between two other points that give a certain ratio. For example, find a point C so that it is two thirds of the way between point A and B.	HSG-GPE.B.6
Find the center and radius of a circle given the equation in standard form.	HSG-GPE.A.1
Find the center and radius of a circle given the equation in expanded form.	HSG-GPE.A.1
Given the focus and the directrix of a parabola, find its equation.	HSG-GPE.A.2
Find the area or perimeter of shapes like triangles, rectangles, parallelograms, and hexagons on the coordinate plane.	HSG-GPE.B.7
Given the graph of a circle, find its center and radius.	HSG-GPE.A.1
Given the center and radius of a circle, determine if a point is inside of the circle, on the circle, or outside of the circle	HSG-GPE.B.4
Given information about the center and radius of a circle, graph it.	HSG-GPE.A.1
Given the standard form equation of a circle, graph the circle.	HSG-GPE.A.1
Given an expanded equation of a circle, graph it.	HSG-GPE.A.1
Practice the relationship between inscribed & central angles that are subtended by the same arc length.	HSG-C.A.2
Find missing angles and lengths in inscribed shapes.	HSG-C.A.2
Use the fact that opposite angles in an inscribed quadrilateral are supplementary to solve a few problems.	HSG-C.A.3
Given the equation of two lines in a variety of forms, determine if they are equal, parallel, perpendicular, or neither.	HSG-GPE.B.5
Find the midpoint of a segment on the coordinate plane, or find the endpoint of a segment given one point and the midpoint.	HSG-GPE.B.6
Practice your 3D visualization skills by rotating 2D shapes.	HSG-GMD.B.4
Solve problems concerning real-world situations using your knowledge of volume, surface area, and density.	HSG-MG.A.2
Solve problems concerning real-world situations with the volumes of cones, cylinders, and spheres.	8.G.C.9 | HSG-GMD.A.3
Given the graph of a circle or its features, find its standard equation.	HSG-GPE.A.1

Geometry

Geometric Measurement and Relationships

Standards Alignment

RIT Range: > 231

Write the equation for a line that is a parallel or perpendicular to a line given in slope-intercept form and goes through a specific point.	HSG-GPE.B.5

Operations and Algebraic Thinking

Expressions and Equations

Standards Alignment

RIT Range: < 160

Practice adding by "putting together" (with numbers less than 10).	K.OA.A.1
Practice subtracting by "taking apart" (with numbers less than 10).	K.OA.A.1

RIT Range: 161-178

Practice adding 3 numbers. All numbers in these problems are 20 or less.	1.OA.A.2
Practice adding and subtracting to solve word problems. Numbers used are 20 or less.	1.OA.A.1
Practice solving more challenging word problems with addition and subtraction. Numbers used are 20 or less.	1.OA.A.1
Practice solving word problems by finding how many more (or fewer) objects there are. Numbers used are 20 or less.	1.OA.A.1
Practice solving more word problems by finding how many more (or fewer) objects there are. Numbers used are 20 or less.	1.OA.A.1
Learn how to solve problems like "_ _ _ - 7 = 18" where you don't know one of the values in an addition or subtraction equation.	1.OA.D.8
Practice seeing how addition and subtraction are related.	1.OA.B.4

RIT Range: 179-191

Practice adding and subtracting to solve word problems. These questions are result unknown or change unknown problems. Numbers used are 100 or less.	2.OA.A.1
Practice solving word problems with addition and subtraction. These questions are comparison problems including difference unknown, smaller value unknown, and bigger value unknown. Numbers used are 100 or less.	2.OA.A.1
Practice solving word problems with addition and subtraction. These questions are start unknown problems including add to and take from problems. Numbers used are 100 or less.	2.OA.A.1

Practice solving more challenging addition and subtraction word problems with "more" and "fewer".€‹ Multi-step problems are also included. Numbers used are 100 or less. 2.OA.A.1

Practice solving problems like "_ __ - 45 = 27" where you have to figure out the missing value in an addition or subtraction equation. 2.OA.A.1

Operations and Algebraic Thinking

Expressions and Equations

	Standards Alignment
RIT Range: 179-191	
Add and subtract lengths to solve word problems.	2.OA.A.1
Practice adding 2-digit numbers like 43+27 that have sums that are multiples of 10.	2.NBT.B.5
Practice adding two-digit numbers by making groups of ten.	2.NBT.B.5
Read and interpret picture graphs.	2.OA.A.1
RIT Range: 192-202	
Addition using groups of 10 and 100	3.NBT.A.2
RIT Range: 192-202	
Practice changing the grouping of factors in multiplication problems and see how it affects the product.	3.OA.B.5
Practice changing the order of factors in a multiplication problem and see how it affects the product.	3.OA.B.5
Divide two numbers. Quotients are equal to or less than 10.	3.OA.A.4
Practice solving for unknown letters and symbols in equations.	3.OA.B.6
See the relationship between multiplication and division problems.	3.OA.B.6
Find both the multiplication and division equation that can be used to solve a word problem.	3.OA.B.6
Solve two-step word problems with addition, subtraction, multiplication, and division. Some questions include estimation.	3.OA.D.8
RIT Range: 204 - 212	
Comparing with multiplication	4.OA.A.1
RIT Range: 203-212	
Practice solving multiplication and division word problems. Some problems have remainders.	4.OA.A.2
Multiply 2- or 3-digit numbers by 1-digit numbers. No regrouping.	4.NBT.B.5
Multiply 3- or 4-digit numbers by 1-digit numbers. Regrouping (carrying) needed.	4.NBT.B.5
Multiply 2-digit numbers by 2-digit numbers. Regrouping (carrying) needed.	4.NBT.B.5
Multiply a 1-digit number by a multi-digit number by decomposing the multi-digit number.	4.NBT.B.5
Use an area model to decompose factors and multiply.	4.NBT.B.5

Operations and Algebraic Thinking

Expressions and Equations

	Standards Alignment
RIT Range: 203-212	
Use an area model to decompose the larger factor and multiply.	4.NBT.B.5
RIT Range: 213-219	
Practice creating expressions with parentheses from real-world contexts.	5.OA.A.2
Solve multi-step expressions with parentheses. Place parentheses in an expression to make the expression equivalent to a given number.	5.OA.A.1
Solve and interpret fraction multiplication word problems.	5.NF.B.6
Practice evaluating powers of ten.	5.NBT.A.2
Practice changing expressions from words to math.	5.OA.A.2
Give the number of tens a number is being multiplied or divided by when the decimal is moved to the left or right.	5.NBT.A.2
RIT Range: 220-223	
Simplify algebraic expressions by combining like terms.	6.EE.A.3
Practice expanding expressions using the distributive property then combining like terms.	6.EE.A.3
Practice figuring out of a variable is dependent or independent.	6.EE.C.9
Practice applying the distributive property to algebraic expressions.	6.EE.A.3
Practice writing basic equations to model real-world situations.	6.EE.B.6 | 6.EE.B.7
Practice determining whether or not two algebraic expressions are equivalent by manipulating the expressions. These problems require you to combine like terms and apply the distributive property.	6.EE.A.3
Practice plugging in values to evaluate real-world algebraic expressions. These are introductory problems, so the expressions aren't too complicated.	6.EE.A.2
Practice solving more challenging problems using the order of operations.	6.EE.A.1
Practice spotting the mistake in someone else's work as they attempt to solve one-step equations.	6.EE.B.7
Create number line graphs of inequalities.	6.EE.B.8
Practice writing inequalities with variables to describe real-world situations.	6.EE.B.6 | 6.EE.B.8

Practice solving equations in one step by multiplying or dividing a value from both sides.	6.EE.B.7 | HSA-REI.B.3
Practice solving equations in one step by adding or subtracting the same value from both sides.	6.EE.B.7 | HSA-REI.B.3
Practice solving equations in one step by adding or subtracting a number from both sides. These problems involve decimals and fractions.	6.EE.B.7

Operations and Algebraic Thinking

Expressions and Equations

	Standards Alignment
RIT Range: 220-223	
Practice solving equations in one step by multiplying or dividing a number from both sides. These problems involve decimals and fractions.	6.EE.B.7
Practice taking exponents of whole numbers. All exponents in these problems are either positive or zero.	6.EE.A.1
Practice evaluating exponents that have fractional bases.	6.EE.A.1
Practice plugging in values to equations and checking to see if the equations hold true.	6.EE.B.5
Practice plugging in values to inequalities and checking to see if the inequalities hold true.	6.EE.B.8
Practice writing algebraic expressions to match verbal descriptions of mathematical operations.	6.EE.A.2
Practice writing slightly more complex algebraic expressions to model real-world situations.	6.EE.A.2
Practice writing basic algebraic expressions to match verbal descriptions of mathematical operations.	6.EE.A.2
Practice writing basic algebraic expressions to model real-world situations.	6.EE.A.2
RIT Range: 224-227	
Simplify algebraic expressions by combining like terms. Coefficients on some terms are negative.	7.EE.A.1
Practice combining like terms using the distributive property. These problems involve adding and subtracting negative numbers.	7.EE.A.1
Practice solving word problems involving price discounts, taxes, and tip calculations.	7.EE.B.3
Practice figuring out which expressions are equivalent by applying your knowledge of negative numbers and the distributive property.	7.EE.A.1
Factor expressions like 3x-9 by applying the distributive property. (All expressions in this exercise are linear binomials.)	7.EE.A.1
Practice interpreting linear expressions	7.EE.A.2
Practice solving equations that take two steps to solve.	7.EE.B.4 | HSA-REI.B.3
Practice writing equations to model real-world situations, then solve the equations to answer interesting questions about the situations.	7.EE.B.4
Practice combining like terms for expressions that have rational coefficients. This requires adding and subtracting fractions.	7.EE.A.1
Practice solving word problems involving price markups and commission fees.	7.EE.B.3
Practice solving multi-step word problems. The numbers in these problems may be fractions, decimals, and percents.	7.EE.B.3

Operations and Algebraic Thinking

Expressions and Equations

	Standards Alignment
RIT Range: 224-227	
Practice solving equations that take two steps to solve. These problems involve arithmetic with fractions and decimals.	7.EE.B.4
RIT Range: 228-230	
Given two numbers in scientific notation, practice adding and subtracting them.	8.EE.A.4
Solve age word problems with a system of equations.	8.EE.C.8
Practice comparing two real-world quantities by approximating them with powers of 10.	8.EE.A.3
A variety of questions about rates and proportional relationships involving graphs, tables, and equations.	8.EE.B.5
Given a linear equation with missing values, determine appropriate values in order to have one, zero, or infinite solutions.	8.EE.C.7
Practice solving more challenging problems involving scientific notation.	8.EE.A.4
Determine the number of solutions of a given system of equations by considering its algebraic solution process.	8.EE.C.8 | HSA-SSE.B.3
Practice finding the cube root of a perfect cube positive integer.	8.EE.A.2
Practice solving equations by squaring or cubing both sides.	8.EE.A.2
Practice evaluating expressions by adding, subtracting, or multiplying exponents.	8.EE.A.1
Practice computing numbers raised to positive and negative exponents. Bases may be fractions.	8.EE.A.1
Find the graph of a linear equation given in standard form.	8.EE.C.7 | HSA-REI.D.10
Determine the number of solutions of a given system of equations by considering its graph.	8.EE.C.8 | HSA-REI.D.10 | HSA-REI.D.11
Graph a system of equations in slope-intercept or standard form, and find their solution using the graphs.	8.EE.C.8 | HSA-REI.C.6 | HSA-REI.D.10 | HSA-REI.D.11
Graphing proportional relationships	8.EE.B.5
Given the x or y value of a 2-variable equation solution, find the value for the other variable in the solution.	8.EE.C.7 | HSA-REI.B.3 | HSA-REI.D.10
Practice solving one-variable equations like 20 - 7x = 6x - 6, where the variable appears on both sides of the equals sign.	8.EE.C.7 | HSA-REI.B.3

Practice solving problems using your knowledge of square and cube roots. 8.EE.A.2

Practice expressing products and quotients in scientific notation. 8.EE.A.4

Practice solving equations with parentheses using the distributive property. 8.EE.C.7 | HSA-REI.B.3

Solve linear equations that contain expressions with parentheses and the coefficients are rational numbers. 8.EE.C.7 | HSA-REI.B.3

Operations and Algebraic Thinking

Expressions and Equations

	Standards Alignment
RIT Range: 228-230	
Practice solving multiplication and division problems that involve powers of ten.	8.EE.A.3
Practice applying properties of exponents.	8.EE.A.1
Practice taking square roots of decimals and fractions.	8.EE.A.2
Practice expressing numbers in scientific notation.	8.EE.A.4
Practice telling whether an equation has one, zero, or infinite solutions.	8.EE.C.7
Practice finding the square root of a perfect square positive integer.	8.EE.A.2
Solve systems of equations with any number of solutions using any solution method.	8.EE.C.8 | HSA-APR.A.1 | HSA-REI.C.6 | HSA-SSE.B.3
Solve systems of equation with multi-step elimination (e.g., a manipulation is needed in order for x-values or y-values to cancel each other out).	8.EE.C.8 | HSA-APR.A.1 | HSA-REI.C.6 | HSA-SSE.B.3
Solve systems of equation with one-step elimination (e.g., x-values or y-values cancel each other out).	8.EE.C.8 | HSA-APR.A.1 | HSA-REI.C.6
Solve systems of equations where one of the equations is solved for one of the variables.	8.EE.C.8 | HSA-REI.C.6 | HSA-SSE.B.3
Determine whether a couple of given systems of equations are equivalent or not to a third given system.	8.EE.C.8 | HSA-APR.A.1 | HSA-REI.C.5
Solve word problems by modeling them into a system of equations and solving it.	8.EE.C.8 | HSA-APR.A.1 | HSA-CED.A.2 | HSA-CED.A.3 | HSA-REI.C.6 | HSA-SSE.B.3
Solve linear equations where the variable appears on both sides of the equation and the coefficients are decimals or fractions.	8.EE.C.7 | HSA-REI.B.3
Verify whether a given pair of values is a solution to a system of equations.	8.EE.C.8
RIT Range: > 231	
Example: Add $(2x^2-3)$ and $(7x^3-4x+1)$.	HSA-APR.A.1
Example: Subtract $(x^2+2xy-y)$ and $(3x+5xy+2y^2)$.	HSA-APR.A.1
Example: Subtract $-2x^2+4x-1$ from $6x^2+3x-9$.	HSA-APR.A.1
Choose which step an error was made in adding or subtracting polynomials.	HSA-APR.A.1
Example: Subtract a4a²b²-2b from -3a5a^2b²+2b	HSA-APR.A.1
Check whether an ordered pair is a solution of a system of two-variable linear inequalities.	HSA-CED.A.3
Given a two-variable linear inequality, check whether a given pair of values	HSA-CED.A.3

is a solution of the inequality.

Given some information about a real-world context, analyze expressions containing unknown variables that model that context. HSA-SSE.A.1 | HSA-SSE.A.2

Solve quadratic equations of the form x^2+bx+c by completing the square. HSA-REI.B.4 | HSA-SSE.B.3

Operations and Algebraic Thinking

Expressions and Equations

Standards Alignment

RIT Range: > 231

Solve quadratic equations of the form ax^2+bx+c by completing the square.	HSA-REI.B.4 | HSA-SSE.B.3
Practice the method of completing the square with quadratic expressions.	HSA-REI.B.4
Solve compound linear inequalities.	HSA-REI.B.3
Solve general word problems about real-world relationships that can be modeled by linear equations or functions.	HSA-CED.A.2 | HSA-CED.A.4
Determine the number of solutions of a given system of equations by considering its algebraic solution process.	8.EE.C.8 | HSA-SSE.B.3
Convert linear equations between slope-intercept and standard forms.	HSA-SSE.B.3
Analyze quadratic equations in order to determine how many different real number solutions they have.	HSA-SSE.B.3
Rewrite expressions of the form a(x)/b(x), where a is a polynomial b is a linear binomial, in the form q(x)+r(x)/b(x), where q and r are polynomials and the degree of r is less than the degree of b.	HSA-APR.D.6
Rewrite expressions of the form a(x)/b(x), where a is a polynomial b is a monomial, in the form q(x)+r(x)/b(x), where q and r are polynomials and the degree of r is less than the degree of b.	HSA-APR.D.6
Rewrite expressions of the form a(x)/b(x), where a and b are polynomials, in the form q(x)+r(x)/b(x), where q and r are polynomials and the degree of r is less than the degree of b.	HSA-APR.D.6
Determine whether pairs of exponential expressions are equivalent.	HSA-SSE.B.3
Given some information about several unknown variables, evaluate an expression containing those variables.	HSA-SSE.A.2
Given some information about several unknown variables, evaluate an expression containing those variables.	HSA-SSE.A.2
Practice some problems that involve thinking about the conditions for obtaining extraneous solutions while solving radical equations.	HSA-REI.A.2
Factor quadratic expressions into the special products of the general forms (x+a)^2, (x-a)^2, and (x+a)(x-a).	HSA-SSE.A.2
Factor quadratic expressions of the general difference of squares form: (ax)^2-b^2. The factored expressions have the general form (ax+b)(ax-b).	HSA-SSE.A.2
Factor "advanced" polynomials (i.e. polynomials of various degrees and or with two variables) using special product factorization methods.	HSA-SSE.A.2 | HSA-SSE.B.3
Factor quadratics of the form x^2+bx+c.	HSA-SSE.A.2 | HSA-SSE.B.3
Factor polynomials that can be factored as the product of a monomial and a quadratic expression, then further factor the quadratic expression.	HSA-SSE.A.2 | HSA-SSE.B.3

Factor quadratics of the form ax^2+bx+c. HSA-SSE.B.3

Factor "advanced" polynomials (i.e. polynomials of various degrees and or with two variables) using quadratic factorization methods. HSA-SSE.A.2

Operations and Algebraic Thinking

Expressions and Equations

	Standards Alignment
RIT Range: > 231	
Factor quadratic expressions of the general perfect square forms: (ax)^2+2abx+b^2 or (ax)^2-2abx+b^2. The factored expressions have the general forms (ax+b)^2 or (ax-b)^2.	HSA-SSE.A.2
Find special products (perfect squares and difference of squares) of "advanced" binomials: binomials with leading coefficients other than 1; binomials with higher degrees; and binomials with two variables.	HSA-APR.A.1
Use the distributive property to express the product of a monomial and a polynomial as a single polynomial.	HSA-APR.A.1
Express the product of two monomial expressions as a single monomial	HSA-APR.A.1
Use various methods in order to find all the zeros of polynomial expressions or functions.	HSA-APR.B.3 | HSA-SSE.A.2 | HSA-SSE.B.3
Understanding and solving problems with the formula for a finite geometric series	HSA-SSE.B.4
Evaluate finite geometric series given in sigma notation, recursively, or explicitly.	HSA-SSE.B.4
Draw the graph of a line given in slope-intercept form. For example, graph y = 3x + 2.	HSA-REI.D.10
Find the graph of a linear equation given in standard form.	8.EE.C.7 | HSA-REI.D.10
Given the graph of a two-variable linear inequality, check whether a given pair of values is a solution of the inequality.	HSA-CED.A.3
Determine the number of solutions of a given system of equations by considering its graph.	8.EE.C.8 | HSA-REI.D.10 | HSA-REI.D.11
Find the range of values of one variable that corresponds to a given value of the other variable in a linear inequality.	HSA-CED.A.3
Graph two-variable linear inequalities.	HSA-CED.A.3 | HSA-REI.D.12
Graph a system of equations in slope-intercept or standard form, and find their solution using the graphs.	8.EE.C.8 | HSA-REI.C.6 | HSA-REI.D.10 | HSA-REI.D.11
Find the range of values of one variable that corresponds to a given value of the other variable in a system of two-variable linear inequalities.	HSA-CED.A.3
Graph the line that represents a real-world relationship that is given verbally.	HSA-REI.D.10
Given the x or y value of a 2-variable equation solution, find the value for the other variable in the solution.	8.EE.C.7 | HSA-REI.B.3 | HSA-REI.D.10
Fit an algebraic two-variable inequality to its appropriate graph.	HSA-CED.A.3
Identify the form of a quadratic function that immediately reveals a given feature of that function. Features in question are the y-intercept of the graph, the zeroes ("roots") of the function, and the vertex of the parabola.	HSA-SSE.B.3
Find the intercepts of a line given a table of values.	HSA-REI.D.10

Operations and Algebraic Thinking

Expressions and Equations

	Standards Alignment
RIT Range: > 231	
Solve word problems about real world relationships that are given in formulas.	HSA-SSE.A.1
Interpret the graphs of both linear and nonlinear functions.	HSA-REI.D.10
Solve word problems about real world relationships that are given in graphs.	HSA-REI.D.10
Given a function that models an exponential situation, rewrite the function in order to find its change for a different time unit.	HSA-SSE.A.1 | HSA-SSE.B.3
Given a function that models an exponential situation, rewrite the function in order to analyze its rate of change.	HSA-SSE.A.1 | HSA-SSE.B.3
Solve advanced and complicated equations using the power of graphs.	HSA-REI.D.11
Answer questions about real world situation, given the quadratic functions that model them.	HSA-SSE.B.3
Practice solving equations in one step by multiplying or dividing a value from both sides.	6.EE.B.7 | HSA-REI.B.3
Practice solving equations that take two steps to solve.	7.EE.B.4 | HSA-REI.B.3
Practice solving one-variable equations like 20 - 7x = 6x - 6, where the variable appears on both sides of the equals sign.	8.EE.C.7 | HSA-REI.B.3
Solve equations that have one rational expression whose numerator and denominator are linear expressions.	HSA-REI.A.2
Solve linear inequalities that take multiple steps to solve.	HSA-REI.B.3
Solve multi-variable formulas for a specific variable in order to solve some word problems.	HSA-CED.A.4
Find all the inputs that correspond to a given function output, using the function's graph.	HSA-REI.D.10
Solve word problems that involve linear inequalities in two variables.	HSA-CED.A.3 | HSA-SSE.A.1
Solve word problems that involve systems of linear inequalities.	HSA-CED.A.3 | HSA-SSE.A.1
Given a function that models an exponential situation, find the factor by which the quantity changes per unit time interval.	HSA-SSE.B.3
Construct an equation or an inequality that model a given context.	HSA-CED.A.1
Modeling expressions can be quadratic, rational, or exponential.	
Use the distributive property to express the product of two binomials as a single polynomial.	HSA-APR.A.1
Find perfect squares of the forms $(x+a)^2$ and $(x-a)^2$, and differences of squares of the form (x+a)(x-a).	HSA-APR.A.1
Use the distributive property to express the product of a binomial and a polynomial as a single polynomial.	HSA-APR.A.1
Example: Find the values of the variables to make the following equation true $-11(y^2-cy+2) = dy^2+33y-f$.	HSA-APR.A.1

Operations and Algebraic Thinking

Expressions and Equations

Standards Alignment

RIT Range: > 231

More challenging multiplying monomial problems like find the area or find missing values to make an equation true.	HSA-APR.A.1
Practice solving equations with parentheses using the distributive property.	8.EE.C.7 | HSA-REI.B.3
Solve linear equations that contain expressions with parentheses and the coefficients are rational numbers.	8.EE.C.7 | HSA-REI.B.3
Simplify rational expressions that contain rational expressions within their numerators or denominators.	HSA-SSE.A.2
Practice solving equations in one step by adding or subtracting the same value from both sides.	6.EE.B.7 | HSA-REI.B.3
Practice solving inequalities in one step.	HSA-REI.B.3
Determine which ordered pairs are solutions to equations.	HSA-REI.D.10
Determine whether given polynomial identities are true, and whether given proofs of such identities are valid.	HSA-APR.C.4
Given a polynomial, determine the intervals in which it is positive or negative.	HSA-APR.B.3
Use the quadratic formula to find the roots of a quadratic function.	HSA-REI.B.4
Solve quadratic equations using the quadratic formula. some of the equations have real solutions while others have complex solutions.	HSA-REI.B.4 | HSN-CN.C.7
Solve advanced rational equations with multiple expressions.	HSA-REI.A.2
Use the PRT (Polynomial Remainder Theorem) to determine the factors of polynomials and their remainders when divided by linear expressions.	HSA-APR.B.2
Rewrite a given exponential expression in a specific desired form.	HSA-SSE.B.3
Given a function that models an exponential situation, find the time interval over which the quantity changes by a given factor.	HSA-SSE.B.3
Find the y-intercept, the zeroes ("roots"), and the vertex of the graphs of quadratic functions. Functions are given in standard, vertex, and factored form.	HSA-SSE.B.3
Factor the numerator and the denominator of a rational expression and cancel out common monomial factors.	HSA-APR.D.6
Factor the numerator and the denominator of a rational expression and cancel out common binomial terms.	HSA-APR.D.6
Factor the numerator and the denominator of a rational expression using advanced methods, and cancel out common terms.	HSA-APR.D.6
Find the slope of a line on the coordinate plane.	HSA-REI.D.10

Find the slope of a line from its equation.	HSA-REI.D.10
Extract the slope of a line from its equation	HSA-REI.D.10
Find the slope of the line that goes through the two points that are given to you.	HSA-REI.D.10

Operations and Algebraic Thinking

Expressions and Equations

RIT Range: > 231

	Standards Alignment
Find the slope-intercept equation of a line from its graph.	HSA-REI.D.10
Find the equation of a line passing through two points	HSA-REI.D.10
Example: Solve 32^(x/3) = 8^(x-12).	HSA-SSE.B.3
Example: Solve 2^(3x+5) = 64^(x-7).	HSA-SSE.B.3
Solve square-root equations by first arranging them and then taking the square of both sides.	HSA-REI.A.2
Solve square-root equations by taking the square of both sides.	HSA-REI.A.2
Solve a linear equation where the coefficients are represented by letters.	HSA-REI.B.3
Solve quadratic equations of the form x^2+bx+c=0 that can be rewritten according to their linear factors.	HSA-REI.B.4 | HSA-SSE.B.3
Solve quadratic equations of the form ax^2+bx+c=0 that can be rewritten according to their linear factors.	HSA-REI.B.4 | HSA-SSE.B.3
Solve quadratic equations of the form (x+a)^2-b=0.	HSA-REI.B.4
Solve equations that have one rational expression whose numerator and denominator are polynomial expressions.	HSA-REI.A.2
Solve advanced equations by strategically using quadratic factorization methods.	HSA-REI.B.4 | HSA-SSE.B.3
Rewrite an expression containing two unknown variables by using a given equation that contains those variables.	HSA-SSE.A.1 | HSA-SSE.A.2
Solve systems of equations with any number of solutions using any solution method.	8.EE.C.8 | HSA-APR.A.1 | HSA-REI.C.6 | HSA-SSE.B.3
Solve systems of equation with multi-step elimination (e.g., a manipulation is needed in order for x-values or y-values to cancel each other out).	8.EE.C.8 | HSA-APR.A.1 | HSA-REI.C.6 | HSA-SSE.B.3
Solve systems of equation with one-step elimination (e.g., x-values or y-values cancel each other out).	8.EE.C.8 | HSA-APR.A.1 | HSA-REI.C.6
Solve systems of equations where one of the equations is solved for one of the variables.	8.EE.C.8 | HSA-REI.C.6 | HSA-SSE.B.3
Practice the connection between the graphical representation of equations and their algebraic solutions.	HSA-REI.D.11
Determine whether a couple of given systems of equations are equivalent or not to a third given system.	8.EE.C.8 | HSA-APR.A.1 | HSA-REI.C.5
Solve word problems by modeling them into a system of equations and solving it.	8.EE.C.8 | HSA-APR.A.1 | HSA-CED.A.2 | HSA-CED.A.3 | HSA-REI.C.6 | HSA-SSE.B.3
Analyze the process of solving a quadratic equation by taking the square root.	HSA-REI.A.1 | HSA-REI.B.4
Select the graph that best suits a polynomial equation by considering the zeros of the polynomial.	HSA-APR.B.3 | HSA-SSE.A.2 | HSA-SSE.B.3

Operations and Algebraic Thinking

Expressions and Equations

Standards Alignment

RIT Range: > 231

Solve linear equations where the variable appears on both sides of the equation and the coefficients are decimals or fractions.	8.EE.C.7 | HSA-REI.B.3
Practice writing finite geometric series like 3 + 6 + 12 + 24 in sigma notation.	HSA-SSE.B.4
You've had practice with a few different forms of linear equations. Now use your skills.	HSA-REI.D.10

Operations and Algebraic Thinking

Use Functions to Model Relationships

Standards Alignment

RIT Range: 203-212

Generate terms in a pattern when given a rule. Identify features of a pattern that are not explicit to the rule itself.	4.OA.C.5

RIT Range: 213-219

Find the distance between points, graph points, and interpret data on coordinate planes to solve word problems.	5.G.A.2
Plot a given point on the coordinate plane.	5.G.A.2
Generate patterns using given rules. Identify relationships between terms. Graph ordered pairs consisting of corresponding terms from the patterns.	5.OA.B.3

RIT Range: 228-230

Compare features of two linear functions represented in different ways.	8.F.A.2 | HSF-IF.C.9
Compare features of two real-world relationships that can be modeled by linear functions, where the functions are represented in different ways.	8.F.A.2 | HSF-IF.C.9 | HSF-LE.B.5
Find a linear function that represents a real-world relationship that is given verbally.	8.F.B.4 | HSF-BF.A.1 | HSF-LE.A.2 | HSF-LE.B.5
Given the graph of a function, determine its domain or range.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.B.5
Determine the domain of a function according to the algebraic limitations of that function.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.B.5
Interpret expressions with function notation in terms of the context that the function models.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2
Evaluate functions for specific inputs given the formula of the function.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2

Evaluate expressions that contain function notation, given the functions' graphs.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2
Find all the inputs that correspond to a given function output, using the function's formula.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2

Operations and Algebraic Thinking

Use Functions to Model Relationships

Standards Alignment

RIT Range: 228-230

Create functions that match one variable to the other in a two-variable equation.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2 | HSF-LE.A.2
Draw the graph of a line given in slope-intercept form. For example, graph y = 3x + 2.	8.F.A.1 | 8.F.A.3 | HSF-IF.C.7
Find the graph of a linear equation given in standard form.	8.F.A.1 | HSF-IF.C.7
Given the x or y value of a 2-variable equation solution, find the value for the other variable in the solution.	8.F.A.1 | HSF-IF.C.7
Determine which ordered pair represents a solution to a graph or equation.	8.F.B.4
Highlight intervals on the domain of a function where it's only increasing or only decreasing.	8.F.B.5 | HSF-IF.B.4 | HSF-IF.C.7
Find the intercepts of a line given a table of values.	8.F.A.1
Match features of graphs of modeling functions to their real-world meaning.	8.F.B.5 | HSF-IF.B.4 | HSF-IF.C.7
Use information about a situation to figure out the domain of the function which models it.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.B.5
Solve word problems about real world relationships that are given in formulas.	8.F.A.3 | 8.F.B.4 | HSF-LE.B.5
Interpret the graphs of both linear and nonlinear functions.	8.F.B.5
Look at the graph of an equation to find x-intercepts and y-intercepts	8.F.A.1
Determine if a relationship is linear or nonlinear.	8.F.A.3
Determine which ordered pairs are solutions to equations.	8.F.A.1
Highlight intervals on the domain of a function where it's entirely positive or entirely negative.	8.F.B.5 | HSF-IF.B.4 | HSF-IF.C.7
Determine whether a given graph represents a function.	8.F.A.1 | HSF-IF.A.1
Given the graph of a function, find all of its relative maximum and minimum points.	8.F.B.5 | HSF-IF.B.4 | HSF-IF.C.7
Determine whether a table of values of a relationship represents a function.	8.F.A.1 | HSF-IF.A.1
Find the slope of a line on the coordinate plane.	8.F.B.4 | HSF-LE.A.2
Find the slope of a line from its equation.	8.F.B.4
Extract the slope of a line from its equation	8.F.B.4

Find the slope of the line that goes through the two points that are given to you.	8.F.B.4 | HSF-LE.A.2
Find the slope-intercept equation of a line from its graph.	8.F.A.1 | 8.F.A.3 | 8.F.B.4 | HSF-LE.A.2
Find the equation of a line passing through two points	8.F.A.1 | 8.F.A.3 | 8.F.B.4 | HSF-LE.A.2

Operations and Algebraic Thinking

Use Functions to Model Relationships

	Standards Alignment
RIT Range: 228-230	
Solve linear equations for the x-intercept and y-intercept	8.F.A.3 | HSF-IF.C.7
DEPRECATED Solving for the y-intercept	8.F.B.4
You've had practice with a few different forms of linear equations. Now use your skills.	8.F.A.1 | 8.F.A.3 | 8.F.B.4 | HSF-LE.A.2
RIT Range: > 231	
Given the formula of a rational function, determine how it behaves around its vertical asymptote.	HSF-IF.C.7
Find and represent the average rate of change of a real-world relationship.	HSF-IF.B.6
Find the average rate of change of a function over a given interval.	HSF-IF.B.6
Given the sine (or cosine) of an angle, find its cosine (or sine) using the Pythagorean identity.	HSF-TF.C.8
Compare the properties of two quadratic functions, each represented in a different way.	HSF-IF.C.9
Compare features of two linear functions represented in different ways.	8.F.A.2 | HSF-IF.C.9
Compare features of two real-world relationships that can be modeled by linear functions, where the functions are represented in different ways.	8.F.A.2 | HSF-IF.C.9 | HSF-LE.B.5
Compare various features between two functions, each represented in a different way.	HSF-IF.C.9
Practice analyzing the end behavior of two functions that model similar real-world relationship, where one function is exponential and the other is polynomial.	HSF-LE.A.3
Given the formulas of two functions, find the formula of their composition.	HSF-BF.A.1
Construct exponential functions of the basic form f(x)=a*r^x given the initial value of the function and the ratio by which it increases for each unit.	HSF-BF.A.1 | HSF-LE.A.2
Construct exponential functions of the basic form f(x)=a*r^x, either when given a table with two input-output pairs, or when given the graph of the function.	HSF-BF.A.1 | HSF-LE.A.2
Given a verbal description of the rate of change of a real world situation, find the exponential function that models it.	HSF-BF.A.1 | HSF-IF.C.8 | HSF-LE.A.1 | HSF-LE.A.2 | HSF-LE.B.5
Solve general word problems about real-world relationships that can be modeled by linear equations or functions.	HSF-BF.A.1 | HSF-LE.A.2 | HSF-LE.B.5
Find a linear function that represents a real-world relationship that is given verbally.	8.F.B.4 | HSF-BF.A.1 | HSF-LE.A.2 | HSF-LE.B.5

Given a few features of a sinusoidal function, find its formula.	HSF-BF.B.3 | HSF-TF.B.5
Write equations in point-slope form given two pairs of values, and convert the equation into slope-intercept form.	HSF-LE.A.2 | HSF-LE.B.5
Convert linear equations between slope-intercept and standard forms.	HSF-IF.C.8

Operations and Algebraic Thinking

Use Functions to Model Relationships

	Standards Alignment
RIT Range: > 231	
Given the formula of a polynomial function, determine whether that function is even, odd, or neither.	HSF-BF.B.3
Determine the domain of piecewise functions whose assignment rules have different expression types.	HSF-IF.A.1
Analyze polynomial functions to determine how they behave as the input variable increases to positive infinity or decreases to negative infinity.	HSF-IF.C.7
Given a table with values of two quantities over time, determine whether the quantities form grow linearly or exponentially.	HSF-BF.A.1 | HSF-LE.A.1
Given the graph of a function, determine its domain or range.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.B.5
Determine the domain of functions whose expressions are a combination of different types of assignment rules.	HSF-IF.A.1
Find the domain and range of a piecewise function given its formula.	HSF-IF.A.1 | HSF-IF.B.5
Determine the domain of a function according to the algebraic limitations of that function.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.B.5
Given a rational function, determine how it behaves as x approaches +ˆž or -ˆž.	HSF-IF.C.7
Determine whether pairs of exponential expressions are equivalent.	HSF-IF.C.8
Given the formulas of two functions, evaluate the composition of the two functions at a given input.	HSF-BF.A.1
Given the graphs, or some tables of values, of two functions, evaluate the composition of those functions at a given input.	HSF-BF.A.1
Evaluate functions for specific inputs given the graph of the function.	HSF-IF.A.1 | HSF-IF.A.2
Evaluate any logarithm in a calculator with the use of the change of base formula. Example: Evaluate log,…(100).	HSF-LE.A.4
Given the graph of a step function, find the function's outputs for given specific inputs.	HSF-IF.A.1 | HSF-IF.A.2
Given the formula of a piecewise function, evaluate it for a specific input.	HSF-IF.A.1 | HSF-IF.A.2
Find the first few terms of sequences that are defined recursively.	HSF-IF.A.1 | HSF-IF.A.2
Given the graph of a function, determine if it's even, odd, or neither.	HSF-BF.B.3
Given the explicit formula of an arithmetic sequence, find its recursive formula, and vice versa.	HSF-BF.A.2 | HSF-IF.A.1
Given the explicit formula of a geometric sequence, find its recursive formula, and vice versa.	HSF-BF.A.2 | HSF-IF.A.1
Solve problems such as: The first four terms in an arithmetic sequence are 12, 5, -2, and -9. Find an explicit formula for the sequence.	HSF-LE.A.4
Solve word problems about exponential situations.	HSF-IF.C.7 | HSF-TF.B.5
Given the formula of a sinusoidal function, determine its amplitude.	

Operations and Algebraic Thinking

Use Functions to Model Relationships

Standards Alignment

RIT Range: > 231

Given the formula of a sinusoidal function, determine its midline equation.	HSF-IF.C.7 | HSF-TF.B.5
Given the formula of a sinusoidal function, determine its period.	HSF-IF.C.7 | HSF-TF.B.5
Interpret expressions with function notation in terms of the context that the function models.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2
Evaluate functions for specific inputs given the formula of the function.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2
Evaluate expressions that contain function notation, given the functions' graphs.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2
Find all the inputs that correspond to a given function output, using the function's formula.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2
Create functions that match one variable to the other in a two-variable equation.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.A.2 | HSF-LE.A.2
Evaluating geometric sequences 1	HSF-IF.A.3
Evaluating geometric sequences 2	HSF-IF.A.3
Draw the graph of a line given in slope-intercept form. For example, graph y = 3x + 2.	8.F.A.1 | 8.F.A.3 | HSF-IF.C.7
Find the graph of a linear equation given in standard form.	8.F.A.1 | HSF-IF.C.7
Graph quadratic functions given in the standard form ax^2+bx+c.	HSF-IF.C.7
Graph quadratic functions that are given in the vertex form a(x+b)^2+c.	HSF-IF.C.7
Graph quadratic functions given in any form.	HSF-IF.C.7
Graph the line that represents a real-world relationship that is given verbally.	HSF-IF.C.7
Given the graph of a nonlinear piecewise function, find its formula.	HSF-IF.C.7
Given the x or y value of a 2-variable equation solution, find the value for the other variable in the solution.	8.F.A.1 | HSF-IF.C.7
Graph quadratic functions that are given in factored form.	HSF-IF.C.7
Given the formula of a sinusoidal function of the form a*f(bx)+d, draw its graph.	HSF-IF.C.7
Graph functions that contain absolute value expressions, like f(x)=|x+3|+2.	HSF-IF.C.7
Graph exponential functions of the basic form f(x)=a*r^x while considering the end behavior of the function.	HSF-IF.C.7

Graph exponential functions and find the appropriate graph given the function.	HSF-IF.C.7
Graph logarithmic functions and find the appropriate graph given the function.	HSF-IF.C.7
Given the formula of a square-root or a cube-root function, find the appropriate graph.	HSF-IF.C.7

Operations and Algebraic Thinking

Use Functions to Model Relationships

Standards Alignment

RIT Range: > 231

Determine which of four graphs fits the formula of a given function.	HSF-IF.C.7
Identify the form of a quadratic function that immediately reveals a given feature of that function. Features in question are the y-intercept of the graph, the zeroes ("roots") of the function, and the vertex of the parabola.	HSF-IF.C.8
Highlight intervals on the domain of a function where it's only increasing or only decreasing.	8.F.B.5 | HSF-IF.B.4 | HSF-IF.C.7
Match features of graphs of modeling functions to their real-world meaning.	8.F.B.5 | HSF-IF.B.4 | HSF-IF.C.7
Use information about a situation to figure out the domain of the function which models it.	8.F.A.1 | HSF-IF.A.1 | HSF-IF.B.5
Solve word problems about real world relationships that are given in formulas.	8.F.A.3 | 8.F.B.4 | HSF-LE.B.5
Solve word problems about real world relationships that are given in graphs.	HSF-IF.C.7 | HSF-LE.B.5
Solve word problems about real world relationships that are given in tables.	HSF-IF.B.4 | HSF-LE.A.2 | HSF-LE.B.5
Given a function that models an exponential situation, rewrite the function in order to find its change for a different time unit.	HSF-IF.C.8 | HSF-LE.A.1 | HSF-LE.B.5
Given a function that models an exponential situation, rewrite the function in order to analyze its rate of change.	HSF-IF.C.8 | HSF-LE.A.1 | HSF-LE.B.5
Given the graph that models a real world context, answer a question about the periodicity of the graph.	HSF-IF.B.4
Inverses of linear functions	HSF-BF.B.4a
Answer questions about real world situation, given the quadratic functions that model them.	HSF-IF.C.8
Find all the inputs that correspond to a given function output, using the function's graph.	HSF-IF.A.1 | HSF-IF.A.2
Given two basic functions that model a real-world situation, compose them in order to model a more complex situation.	HSF-BF.A.1
Given a function that models an exponential situation, find the factor by which the quantity changes per unit time interval.	HSF-IF.C.8 | HSF-LE.A.1 | HSF-LE.B.5
Given the description of a real-world relationship, find the sinusoidal function that models it.	HSF-TF.B.5
Given the description of a real-world relationship, find the sinusoidal function that models it. The functions in this exercise have a phase (horizontal) shift.	HSF-TF.B.5
Given the graph of a sinusoidal function, determine its period.	HSF-IF.C.7 | HSF-TF.B.5

Draw the graph of a piecewise function or determine its formula from its graph.	HSF-IF.A.1 | HSF-IF.C.7
Given a rational function, sort given input values according to zeros, vertical asymptotes, and removable discontinuities.	HSF-IF.C.7

Operations and Algebraic Thinking

Use Functions to Model Relationships

Standards Alignment

RIT Range: > 231

Highlight intervals on the domain of a function where it's entirely positive or entirely negative.	8.F.B.5 | HSF-IF.B.4 | HSF-IF.C.7
Given a polynomial, determine the intervals in which it is positive or negative.	HSF-IF.C.7
Given the equation of a quadratic function, determine its range.	HSF-IF.A.1
Given the graph that models a real world context, answer a question about the end behavior of the graph.	HSF-IF.B.4
Determine whether a given graph represents a function.	8.F.A.1 | HSF-IF.A.1
Given the graph of a function, find its absolute maximum and minimum points.	HSF-IF.B.4 | HSF-IF.C.7
Given the graph of a function, find all of its relative maximum and minimum points.	8.F.B.5 | HSF-IF.B.4 | HSF-IF.C.7
Determine whether a table of values of a relationship represents a function.	8.F.A.1 | HSF-IF.A.1
Given a verbal description of a real-world relationship, determine the sequence that models that relationship.	HSF-BF.A.1 | HSF-BF.A.2 | HSF-LE.A.1
Find the recursive formula of an arithmetic sequence given the first few terms or given an explicit formula.	HSF-BF.A.2 | HSF-IF.A.1
Find the recursive formula of a geometric sequence given the first few terms or given an explicit formula.	HSF-BF.A.2 | HSF-IF.A.1
Rewrite a given exponential expression in a specific desired form.	HSF-IF.C.8
Given a function that models an exponential situation, find the time interval over which the quantity changes by a given factor.	HSF-IF.C.8 | HSF-LE.A.1 | HSF-LE.B.5
Find the y-intercept, the zeroes ("roots"), and the vertex of the graphs of quadratic functions. Functions are given in standard, vertex, and factored form.	HSF-IF.C.8
Solve problems such as: The first four terms in a geometric sequence are 1/3, 1, 3, and 9. Find an explicit formula for the sequence.	HSF-BF.A.2 | HSF-IF.A.1
Shift functions horizontally and vertically, and practice the relationship between the graphical and the algebraic representations of those shifts.	HSF-BF.B.3
Given the graphs of functions f and g where g is a transformation of f, determine the formula of g in terms of f.	HSF-BF.B.3
Find the slope of a line on the coordinate plane.	8.F.B.4 | HSF-LE.A.2
Find the slope of the line that goes through the two points that are given to you.	8.F.B.4 | HSF-LE.A.2

Find the slope-intercept equation of a line from its graph.	8.F.A.1 | 8.F.A.3 | 8.F.B.4 | HSF-LE.A.2
Find the equation of a line passing through two points	8.F.A.1 | 8.F.A.3 | 8.F.B.4 | HSF-LE.A.2
Solve exponential equations that have 2 or other numbers at the base of the exponential term.	HSF-LE.A.4

Operations and Algebraic Thinking

Use Functions to Model Relationships

	Standards Alignment
RIT Range: > 231	
Solve linear equations for the x-intercept and y-intercept	8.F.A.3 | HSF-IF.C.7
Given a verbal description of a real-world relationship, determine whether that relationship is linear or exponential.	HSF-LE.A.1
Solve exponential equations that have 10 or e at the base of the exponential term.	HSF-LE.A.4
Select the graph that best suits a polynomial equation by considering the zeros of the polynomial.	HSF-IF.C.7 | HSF-IF.C.8
You've had practice with a few different forms of linear equations. Now use your skills.	8.F.A.1 | 8.F.A.3 | 8.F.B.4 | HSF-LE.A.2

Statistics and Probability

Interpreting Categorical and Quantitative Data

	Standards Alignment
RIT Range: 161-178	
Read and interpret bar graphs.	1.MD.C.4
RIT Range: 179-191	
Practice creating line plots (dot plots) from data sets.	2.MD.D.9
Practice creating bar graphs (bar charts) from data sets.	2.MD.D.9
Use bar graphs to solve addition and subtraction word problems.	2.MD.D.10
Answer questions using line plots and data sets.	2.MD.D.9
Read and interpret picture graphs.	2.MD.D.10
RIT Range: 192 - 203	
Creating line plots	3.MD.B.4
RIT Range: 192-202	
Create a bar graph with the data given.	3.MD.B.3
Create and interpret picture graphs.	3.MD.B.3
Read and interpret a double bar graphs.	3.MD.B.3
Interpret picture graphs to answer questions about a context.	3.MD.B.3
Interpret bar graphs to answer questions about a context.	3.MD.B.3
Use picture graphs to solve word problems.	3.MD.B.3

Statistics and Probability

Interpreting Categorical and Quantitative Data

	Standards Alignment
RIT Range: 203-212	
Create and interpret dot plots using data with fractions. Fraction operations include addition and subtraction.	4.MD.B.4
RIT Range: 213-219	
Interpret fraction data on dot plots to solve word problems.	5.MD.B.2
RIT Range: 220-223	
Practice reading information presented in box plots.	6.SP.A.2 | 6.SP.A.3 | 6.SP.B.4 | 6.SP.B.5
Practice reading basic dot plots and frequency tables.	6.SP.B.4
More practice making box plots to summarize data sets.	6.SP.B.4
Practice computing the mean of data sets presented in a variety of formats, such as frequency tables and dot plots.	6.SP.B.4
Practice some nifty new vocab for describing data distributions.	6.SP.A.2
Practice interpreting and comparing dot plots, histograms, and box plots.	6.SP.B.4
Practice creating dot plots. Dot plots are very similar to frequency tables, but they make it easier to see the data.	6.SP.B.4
Practice creating frequency tables from small data sets.	6.SP.B.4
Practice creating histograms.	6.SP.B.4
Practice figuring out how the mean and median are affected when a data point is added to, taken from, or shifted within a data set.	6.SP.A.3
Practice understanding the meaning of quartiles of data sets.	6.SP.B.4
Practice reading histograms.	6.SP.B.4
Practice explaining the shapes of data distributions. Some distributions are symmetrical, perfectly balanced on the left and right. Other distributions are unbalanced. We say they are €œskewed€ and have €œtails."	6.SP.A.2
Practice spotting the difference between statistical and non-statistical questions.	6.SP.A.1
RIT Range: 224-227	
Practice comparing distributions that are presented in dot plots, histograms, and box plots.	7.SP.B.3 | 7.SP.B.4

RIT Range: 228-230

Practice plotting points to construct a scatter plot.	8.SP.A.1
Practice estimating the equation of a line of best fit through data points in a scatter plot. Then, use the equation to make a prediction.	8.SP.A.3

Statistics and Probability

Interpreting Categorical and Quantitative Data

Standards Alignment

RIT Range: 228-230

Do you understand how two-way tables really work? Here's your chance to practice. Go get 'em! You got this!	8.SP.A.4
Practice making sense of trends in scatter plots. That is, explain what trends mean in terms of real-world quantities.	8.SP.A.1
Given a scatter plot, can you estimate the slope of the line of best fit that goes through the data points?	8.SP.A.3 | HSS-ID.B.6 | HSS-ID.C.7
A good scatter plot has the independent variable on the x-axis and the dependent variable on the y-axis. Also, the scale of both axes should be reasonable, making the data as easy to read as possible. In these practice problems, we practice telling good s	8.SP.A.1
Given a random assortment of points, draw a line of best fit through them.	8.SP.A.2 | HSS-ID.B.6
Practice identifying the types of correlations shown in scatter plots. Sometimes we see linear correlations (positive or negative), sometimes we see non-linear correlations (the data seems to follow a curve), and other times we don't see any correlation a	8.SP.A.1
Practice interpreting two-way frequency tables. For example, what does the cell in the top left tell you?	8.SP.A.4
Practice interpreting two-way relative frequency tables	8.SP.A.4
Given a Venn diagram or information about a relationship, create a two-way frequency table.	8.SP.A.4
Practice creating two-way relative frequency tables from a two-way frequency table.	8.SP.A.4

RIT Range: > 231

Match correlation coefficients to scatterplots to build a deeper intuition behind correlation coefficients.	HSS-ID.C.8
Practice applying the 68-95-99.7 empirical rule.	HSS-ID.A.4
Determine if a quadratic or exponential model fits a data set better, then use the model to make a prediction.	HSS-ID.B.6
Take a look at two different data distributions and draw some comparisons.	HSS-ID.A.1 | HSS-ID.A.2 | HSS-ID.A.3
Given a scatter plot, can you estimate the slope of the line of best fit that goes through the data points?	8.SP.A.3 | HSS-ID.B.6 | HSS-ID.C.7
Given a random assortment of points, draw a line of best fit through them.	8.SP.A.2 | HSS-ID.B.6

Calculate the standard deviation of a population.	HSS-ID.A.2
Analyze categorical data to find some trends.	HSS-ID.B.5
Determines if a statistical study is a sample study, an experiment, or an observational study.	HSS-ID.C.9

Statistics and Probability

Interpreting Categorical and Quantitative Data

Standards Alignment

RIT Range: > 231

Find the z-score of a particular measurement given the mean and standard deviation.	HSS-ID.A.4
Use a z-table to find the probability of a particular measurement.	HSS-ID.A.4
Use a z-table to find the probability that a particular measurement is in a range.	HSS-ID.A.4

Statistics and Probability

Using Sampling and Probability to Make Decisions

Standards Alignment

RIT Range: 224-227

Practice using sample space diagrams to find probabilities.	7.SP.C.8
Practice making reasonable estimates of the likelihood of future events based on past experience.	7.SP.C.6
Practice counting possible outcomes in a variety of situations. These problems cover everything from counting the number of ways to get dressed in the morning to counting the number of ways to build a custom pizza.	7.SP.C.8
Given a random sample, practice figuring out what can we reasonably infer about the entire population?	7.SP.A.1
Practice finding probabilities of events, such as rolling dice, drawing marbles out of a bag, and spinning spinners.	7.SP.C.7
Practice creating probability models and understand what makes a valid probability model.	7.SP.C.7
Practice checking if sample space diagrams match a compound event.	7.SP.C.8
Practice expressing probabilities in different forms (fractions, decimals, and percents).	7.SP.C.5
Practice predicting the number of times a certain event will happen.	7.SP.C.7
Practice figuring out whether we took a random sample and whether we're able to draw valid conclusions from our data.	7.SP.A.1 | HSS-IC.A.1

RIT Range: > 231

Find four probabilities for each problem: P(A), P(B), P(A and B), and P(A or B).	HSS-CP.B.7

The union, complement, and intersection of sets.	HSS-CP.A.1
Find dependent probabilities like P(A | B) or P(B | A) for a variety of contexts.	HSS-CP.B.6
Answer interesting questions about subsets of sample spaces.	HSS-CP.A.1

Statistics and Probability

Using Sampling and Probability to Make Decisions

Standards Alignment

RIT Range: > 231

Look at the results of different experiments, and determine if they are statistically significant.	HSS-IC.B.5
Show that you have mastery over the idea behind hypothesis testing by calculating some probabilities and drawing conclusions.	HSS-IC.A.2
Determine if two events are dependent or independent.	HSS-CP.A.2 | HSS-CP.A.3
Analyze categorical data to find some trends.	HSS-CP.A.4 | HSS-CP.A.5 | HSS-CP.B.6
Determines if a statistical study is a sample study, an experiment, or an observational study.	HSS-IC.B.3 | HSS-IC.B.6
Practice figuring out whether we took a random sample and whether we're able to draw valid conclusions from our data.	7.SP.A.1 | HSS-IC.A.1

The Real and Complex Number Systems

Extend and Use Properties

Standards Alignment

RIT Range: < 160

Practice counting which group has more objects.	K.CC.C.6

RIT Range: 161-178

Comparing two-digit numbers	1.NBT.B.3

RIT Range: 161-178

Practice grouping objects by tens.	1.NBT.B.2
Practice dividing shapes into 2 or 4 equal sections.	1.G.A.3
Practice breaking numbers apart into tens and ones.	1.NBT.B.2

RIT Range: 179-191

Practice more challenging problems comparing numbers within 1000.	2.NBT.A.4
Practice telling if shapes are divided into 2 or 4 equal sections.	2.G.A.3
Practice thinking about 3-digit numbers as hundreds, tens, and ones.	2.NBT.A.1
Practice breaking numbers into hundreds, tens, and ones.	2.NBT.A.3

RIT Range: 192 - 203

Fractions on the number line 1	3.NF.A.2

The Real and Complex Number Systems

Extend and Use Properties

	Standards Alignment
RIT Range: 192-202	
Unit fractions on the number line	3.NF.A.2a | 3.NF.A.2b
RIT Range: 192-202	
Compare two fractions that have either the same numerator or denominator.	3.NF.A.3
Compare two fractions that have the same denominator using greater and less than symbols.	3.NF.A.3
Compare two fractions that have the same numerator using greater and less than symbols.	3.NF.A.3
Practice comparing fractions with the help of visuals aides.	3.NF.A.3
Identify unit fractions when given a visual or a context.	3.G.A.2 | 3.NF.A.1
Graph and identify equivalent fractions on a number line.	3.NF.A.3
Identify and create equivalent fractions using visual models.	3.NF.A.3
Identify the fraction of a whole that is shaded.	3.NF.A.1
Practice making groups of 10 and 100 while adding 3-digit numbers.	3.NBT.A.2
Practice identifying numerators and denominators in fractions.	3.NF.A.1
Identify the fraction of a whole that is shaded.	3.NF.A.1
Practice telling if a shape has been divided into equal parts.	3.G.A.2 | 3.NF.A.1
RIT Range: 203-212	
Comparing decimals and fractions	4.NF.C.7
Comparing decimals visually	4.NF.C.7
Decompose fractions with denominators of 100	4.NF.C.5
Equivalent fractions with denominators of 10 and 100	4.NF.C.5
Equivalent fractions with denominators of 10 and 100 intuition	4.NF.C.5
RIT Range: 204 - 212	
Comparing decimals 1	4.NF.C.7
Composite numbers	4.OA.B.4
Fractions as division by 10 or 100	4.NF.C.6
Decimals on the number line 1	4.NF.C.6
Decimals on the number line 2	4.NF.C.6

The Real and Complex Number Systems

Extend and Use Properties

	Standards Alignment
RIT Range: 204 - 212	
Prime numbers	4.OA.B.4
RIT Range: 203-212	
Practice rewriting fractions to have the same denominator.	4.NF.A.2
Practice comparing two fractions with different denominators with greater and less than symbols.	4.NF.A.2
Practice comparing fractions and mixed numbers that have unlike denominators.	4.NF.A.2
Use your place value skills to practice comparing whole numbers.	4.NBT.A.2
Compare multi-digit numbers that challenge your place value understanding	4.NBT.A.2
Sal arranges digits to make the largest or smallest possible number.	4.NBT.A.1
Practice using the same whole to find equivalent fractions.	4.NF.A.2
Practice dividing whole numbers by 10.	4.NBT.A.1
Practice making equivalent fractions by multiplying the numerator and denominator by the same number.	4.NF.A.1
Practice multiplying and dividing whole numbers by ten.	4.NBT.A.1
Practice multiplying whole numbers by 10.	4.NBT.A.1
Practice reading and writing numbers written in expanded form. Example: The expanded form of 376 is 300 + 70 + 6.	4.NBT.A.2
Practice working with whole numbers in written form. For example, "one thousand four hundred three" is the written form of 1403.	4.NBT.A.2
Practice ordering 3 fractions from least to greatest.	4.NF.A.2
Practice thinking about the value of each digit in a number.	4.NBT.A.2
Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.	4.NBT.A.1
Practice problems to challenge your understanding of whole number place value	4.NBT.A.2
Practice finding equivalent fractions. These problems show you pictures of fractions to help you out.	4.NF.A.1
Practice comparing fractions by looking at pictures. Fractions in these problems do not have common denominators.	4.NF.A.2
RIT Range: 213-219	
Compare 2 numbers to thousandths based on meanings of the digits in each place.	5.NBT.A.1

The Real and Complex Number Systems

Extend and Use Properties

Standards Alignment

RIT Range: 213-219

Graph and find the distance between point in first quadrant of coordinate plane.	5.G.A.1
Plot a given point on the coordinate plane.	5.G.A.1
Practice identifying place value names for decimal numbers. For example, the 3 in 4.563 is in the thousandths place.	5.NBT.A.3
Identify points in the first quadrant of a coordinate plane.	5.G.A.1
Practice evaluating powers of ten.	5.NBT.A.2
Give the number of tens a number is being multiplied or divided by when the decimal is moved to the left or right.	5.NBT.A.2
Practice understanding that the fraction bar really means division.	5.NF.B.3
Practice word problems that involve using the fraction bar as division.	5.NF.B.3
Practice identifying the value of one of the digits in a decimal number. For example, the 3 in 4.563 has a value of 0.003.	5.NBT.A.1

RIT Range: 220-223

Practice finding the absolute value of a number, like -4 or 3.	6.NS.C.7
Practice understanding the meaning of absolute value in real-world scenarios.	6.NS.C.7
Write an inequality to compare absolute values.	6.NS.C.7
Practice more challenging comparison problems with absolute value.	6.NS.C.7
Practice solving word problems by interpreting the meaning of points plotted on an xy coordinate system.	6.NS.C.6 | 6.NS.C.8
Practice placing positive and negative decimal numbers on the number line.	6.NS.C.6
Practice placing positive and negative fractions and decimals on the number line.	6.NS.C.6
Practice graphing points and identifying which quadrants they're in.	6.NS.C.6
Practice plotting points like (-2, 4).	6.NS.C.6
Practice explaining the meaning of negative numbers in different scenarios.	6.NS.C.5
Identify positive and negative integers on the number line.	6.NS.C.6

Practice more challenging problems where you identify positive and negative integers on a number line that doesn't have zero labeled.	6.NS.C.6
Practice finding the opposites of numbers. Numbers are opposites when they're on opposite sides of the number line the same distance from zero.	6.NS.C.6
Practice solving more challenging problems finding the opposites of numbers. Numbers are opposites when they're on opposite sides of the number line the same distance from zero.	6.NS.C.6

The Real and Complex Number Systems

Extend and Use Properties

	Standards Alignment
RIT Range: 220-223	
Practice putting positive and negative numbers in order. For example, -28, 12, -51, and 43.	6.NS.C.7
Practice putting positive and negative fractions and decimals in order. For example, -12/4, -2.5, and 3.25.	6.NS.C.7
Practice reflecting points across axes on the xy coordinate plane.	6.NS.C.6 | 6.NS.C.8
Practice finding the distance between two points on the coordinate plane that share the same x- or y-coordinate.	6.NS.C.6 | 6.NS.C.8
Practice comparing positive and negative numbers by thinking about their positions on the number line. Numbers to the right are greater than numbers to the left.	6.NS.C.7
Practice writing inequalities to describe real-world situations.	6.NS.C.7
RIT Range: 228-230	
Practice using a calculator to find the approximate decimal values of irrational numbers.	8.NS.A.2
Practice comparing irrational numbers without using a calculator.	8.NS.A.2
Practice finding the approximate value of square roots by thinking about perfect squares.	8.NS.A.2
Practice converting 1- and 2-digit repeating decimals to fractions.	8.NS.A.1
Practice converting multi-digit repeating decimals to fractions.	8.NS.A.1
Practice identifying whether numbers are rational or irrational.	8.NS.A.1
Practice finding the approximate value of square roots by thinking about perfect squares.	8.NS.A.2
Practice writing fractions as repeating decimals. Get ready to bust out those long division skills!	8.NS.A.1
RIT Range: > 231	
Practice simplifying expressions with multiple radical terms combined by addition, subtraction, multiplication, and/or division.	HSN-RN.A.2
Evaluate numerical expressions with rational exponents, and convert between equivalent forms of exponential and radical expressions.	HSN-RN.A.1 | HSN-RN.A.2
Evaluate numerical exponential expressions and simplify variable exponential expressions by using the properties of exponents.	HSN-RN.A.1 | HSN-RN.A.2
Evaluate numerical expressions and simplify variable expressions with mixed exponential and radical terms, by using the properties of exponents.	HSN-RN.A.1 | HSN-RN.A.2
Add, subtract, multiply, and divide square roots. For example, simplify ˆš50-ˆš32.	HSN-RN.A.2

The Real and Complex Number Systems

Extend and Use Properties

Standards Alignment

RIT Range: > 231

Determine whether an expression that is the combination of two rational/irrational numbers is rational or irrational itself.	HSN-RN.B.3
For example, simplify ˆš18 as 3ˆš2.	HSN-RN.A.2
Evaluate numerical radical expressions and simplify variable radical expressions by using the properties of exponents.	HSN-RN.A.1 | HSN-RN.A.2
Evaluate numerical expressions with unit-fraction exponents or radicals, and convert between the two forms of representations.	HSN-RN.A.1 | HSN-RN.A.2

RIT Range: 231 - 234

Properties of exponents	8.EE.A.1

The Real and Complex Number Systems

Perform Operations

Standards Alignment

RIT Range: < 160

Practice solving word problems by adding small numbers (numbers 10 or less).	K.OA.A.2
Practice counting by tens.	K.CC.A.1
Practice finding missing numbers in a list of numbers between 0 and 100.	K.CC.A.1
Practice solving word problems by subtracting small numbers (numbers 10 or less).	K.OA.A.2

RIT Range: 161-178

Practice solving problems like 34+5 and 34+50.	1.NBT.C.4
Practice adding 3 numbers. All numbers in these problems are 20 or less.	1.OA.A.2
Practice adding. All numbers in these problems are 20 or less.	1.OA.C.6
Practice adding and subtracting to solve word problems. Numbers used are 20 or less.	1.OA.A.1
Practice solving more challenging word problems with addition and subtraction. Numbers used are 20 or less.	1.OA.A.1
Practice solving word problems by finding how many more (or fewer) objects there are. Numbers used are 20 or less.	1.OA.A.1
Practice solving more word problems by finding how many more (or fewer) objects there are. Numbers used are 20 or less.	1.OA.A.1
Practice solving problems like 34+1 and 34+10.	1.NBT.C.4
Practice solving problems like 24 + 45.	1.NBT.C.4

The Real and Complex Number Systems

Perform Operations

Standards Alignment

RIT Range: 161-178

Practice breaking apart problems like 23+45 into problems like 20+40+3+5.	1.NBT.C.4
Practice finding missing numbers in a list of numbers between 0 and 120.	1.NBT.A.1
Practice adding numbers like 45+8.	1.NBT.C.4
Practice solving word problems by finding how many more (or fewer) objects there are. Each problem shows a diagram to help you.	1.OA.A.1

RIT Range: 179-191

Regrouping: two-digit number minus one-digit number	2.NBT.A.4

RIT Range: 179-191

Practice adding and subtracting numbers like 554 and 237 using a number line. All numbers are less than 1000.	2.NBT.B.7
Practice adding two-digit numbers. All numbers in these problems are 100 or less.	2.NBT.B.5
Practice adding and subtracting to solve word problems. These questions are result unknown or change unknown problems. Numbers used are 100 or less.	2.OA.A.1
Practice solving word problems with addition and subtraction. These questions are comparison problems including difference unknown, smaller value unknown, and bigger value unknown. Numbers used are 100 or less.	2.OA.A.1
Practice solving word problems with addition and subtraction. These questions are start unknown problems including add to and take from problems. Numbers used are 100 or less.	2.OA.A.1
Practice solving more challenging addition and subtraction word problems with "more" and "fewer".€‹ Multi-step problems are also included. Numbers used are 100 or less.	2.OA.A.1
Practice adding and subtracting numbers like 54 and 37 using a number line. Numbers used in these problems are all less than 100.	2.NBT.B.7
Practice solving problems like 344+20 and 344+200.	2.NBT.B.7
Practice solving problems like 243 + 452.	2.NBT.B.7
Practice breaking apart big addition problems using place value. For example, 234+567 is the same as 200+500+30+60+4+7.	2.NBT.B.7
Find the total value when given an amount of coins or dollars.	2.MD.C.8 | 2.NBT.A.2

Practice solving problems like "___ - 45 = 27" where you have to figure out the missing value in an addition or subtraction equation.	2.OA.A.1
Add and subtract lengths to solve word problems.	2.OA.A.1
Practice adding 2-digit numbers like 43+27 that have sums that are multiples of 10.	2.NBT.B.5

The Real and Complex Number Systems

Perform Operations

	Standards Alignment
RIT Range: 179-191	
Practice adding two-digit numbers by making groups of ten.	2.NBT.B.5
Practice telling which strategies work for adding two numbers within 100.	2.NBT.B.7
Practice counting by 100s.	2.NBT.A.2
Practice counting by 10s.	2.NBT.A.2
Practice counting by 5s.	2.NBT.A.2
Read and interpret picture graphs.	2.OA.A.1
Practice solving problems like 67-5 and 67-50.	2.NBT.B.5
Practice subtracting. All numbers in these problems are 20 or less.	2.NBT.B.5
Practice subtracting 2-digit numbers.	2.NBT.B.5
Practice subtracting 1, 10, or 100 from a number.	2.NBT.B.7
Practice solving problems like 452 + 241.	2.NBT.B.7
Practice subtracting 1 or 10 from a 2-digit number (no regrouping).	2.NBT.B.5
Practice solving problems like 45 - 24.	2.NBT.B.5
RIT Range: 192 - 203	
Basic division	3.OA.A.4
Multiplying 1-digit numbers	3.OA.A.4
RIT Range: 192-202	
Practice adding three-digit numbers. All sums are 1000 or less.	3.NBT.A.2 | 4.NBT.B.4
Practice changing the grouping of factors in multiplication problems and see how it affects the product.	3.OA.B.5
Divide by 1. Quotients are less than or equal to 10.	3.OA.C.7
Divide by 10. Quotients are less than or equal to 10.	3.OA.C.7
Divide by 2. Quotients are less than or equal to 10.	3.OA.C.7
Divide by 3. Quotients are less than or equal to 10.	3.OA.C.7
Divide by 4. Quotients are less than or equal to 10.	3.OA.C.7
Divide by 5. Quotients are less than or equal to 10.	3.OA.C.7
Divide by 6. Quotients are less than or equal to 10.	3.OA.C.7
Divide by 7. Quotients are less than or equal to 10.	3.OA.C.7

The Real and Complex Number Systems

Perform Operations

	Standards Alignment
RIT Range: 192-202	
Divide by 8. Quotients are less than or equal to 10.	3.OA.C.7
Divide by 9. Quotients are less than or equal to 10.	3.OA.C.7
Practice making groups of 10 and 100 while adding 3-digit numbers.	3.NBT.A.2
Use visual models to understand division.	3.OA.A.2
Practice representing multiplication as equal groups, repeated addition, or arrays.	3.OA.A.1
Multiply a 1-digit number by a multiple of 10.	3.NBT.A.3
Solve word problems with multiples of ten. Decompose multiples of ten to multiply.	3.NBT.A.3
Multiply 0 or 1 times a number less than or equal to 10.	3.OA.C.7
Multiply 2 times a number less than or equal to 10.	3.OA.C.7
Multiply 3 times a number less than or equal to 10.	3.OA.C.7
Multiply 4 times a number less than or equal to 10.	3.OA.C.7
Multiply 5 times a number less than or equal to 10.	3.OA.C.7
Multiply 6 times a number less than or equal to 10.	3.OA.C.7
Multiply 7 times a number less than or equal to 10.	3.OA.C.7
Multiply 8 times a number less than or equal to 10.	3.OA.C.7
Multiply 9 times a number less than or equal to 10.	3.OA.C.7
Practice skip counting to find a number on a number line with only two tick marks labeled.	3.OA.C.7
See the relationship between multiplication and division problems.	3.OA.B.6
Find both the multiplication and division equation that can be used to solve a word problem.	3.OA.B.6
Give your brain a workout with these challenge problems on rounding.	3.NBT.A.1
Practice rounding to the nearest ten and rounding to the nearest hundred on the number line.	3.NBT.A.1
Practice rounding to the nearest ten and rounding to the nearest hundred.	3.NBT.A.1
Subtract with 2 numbers less than 1000.	3.NBT.A.2 | 4.NBT.B.4
Solve two-step word problems with addition, subtraction, multiplication, and division. Some questions include estimation.	3.OA.D.8
RIT Range: 203-212	
Understanding place value	4.NBT.A.1

The Real and Complex Number Systems

Perform Operations

	Standards Alignment
RIT Range: 203-212	
Practice adding fractions that have denominators of 10 and 100.	4.NF.C.5
Add two fractions with the like denominators.	4.NF.B.3
Practice adding three-digit numbers. All sums are 1000 or less.	3.NBT.A.2 | 4.NBT.B.4
Practice solving multiplication and division word problems. Some problems have remainders.	4.OA.A.2
Learn to cancel zeros when dividing numbers like 3000 and 50.	4.NBT.B.6
Rewrite multiplication equations as comparisons and comparisons as equations.	4.OA.A.1
Identify composite numbers less than 100.	4.OA.B.4
Practice rewriting decimals as fractions. These problems use decimals with tenths and hundredths.	4.NF.C.6
Practice rewriting fractions as decimals. Fractions in these problems have denominators of 10 and 100.	4.NF.C.6
Practice writing a fraction as a mixed number and vice versa.	4.NF.B.3
Practice writing decimal numbers shown in grid diagrams.	4.NF.C.6
Practice writing decimal numbers in word form and number form.	4.NF.C.6
Graph tenths between 0 and 1 on the number line.	4.NF.C.6
Graph hundredths between 0 and 0.1 on a number line.	4.NF.C.6
Practice breaking apart (decomposing) some number of hundredths into tenths and hundredths.	4.NF.C.5
Practice dividing 2-, 3-, and 4-digit numbers by a 1-digit number.	4.NBT.B.6
Practice finding remainders in division problems, like 247÷5.	4.NBT.B.6
Decompose 3- and 4-digit dividends to divide them by a 1-digit divisor.	4.NBT.B.6
Practice finding remainders in small division problems, like 24÷5.	4.NBT.B.6
Practice making equivalent fractions by multiplying the numerator and denominator by the same number.	4.NF.A.1
Practice writing equivalent fractions with denominators of 10 and 100.	4.NF.C.5
Practice writing equivalent fractions with denominators of 10 and 100. These problems give you pictures to help you find the answer.	4.NF.C.5
Practice finding factor pairs for whole numbers.	4.OA.B.4
Practice these problems to see how decimals and fractions can represent the same number.	4.NF.C.6
Demonstrate understanding of factors and multiples.	4.OA.B.4

The Real and Complex Number Systems

Perform Operations

	Standards Alignment
RIT Range: 203-212	
Solve word problems that involve converting between U.S. dollars and cents and converting U.S. dollars to other units of money, like pesos.	4.MD.A.2
Solve word problems to find what time an event occurred or how long an event lasted.	4.MD.A.2
Practice breaking up big division problems into smaller, simpler problems.	4.NBT.B.6
Multiply 2- or 3-digit numbers by 1-digit numbers. No regrouping.	4.NBT.B.5
Multiply 3- or 4-digit numbers by 1-digit numbers. Regrouping (carrying) needed.	4.NBT.B.5
Multiply 2-digit numbers by 2-digit numbers. Regrouping (carrying) needed.	4.NBT.B.5
Multiply a 1-digit number by a multi-digit number by decomposing the multi-digit number.	4.NBT.B.5
Select the equation that can be used to solve a word problem.	4.OA.A.1
Practice multiplication problems like 5x100=500.	4.NBT.B.5
Practice multiplication problems like 5x500=2500.	4.NBT.B.5
Use an area model to decompose factors and multiply.	4.NBT.B.5
Use an area model to decompose the larger factor and multiply.	4.NBT.B.5
Practice matching fraction diagrams to multiplication expressions.	4.NF.B.4
Practice multiplying 2-digit multiples of 10, such as 50x70=3500.	4.NBT.B.5
Identify prime numbers less than 100.	4.OA.B.4
Practice division problems that work out to multiples of ten. Example: 1200 ÷ 30 = 40.	4.NBT.B.6
Practice rounding whole numbers to the nearest hundred or thousand.	4.NBT.A.3
Solve a subtraction problem with two fractions with like denominators.	4.NF.B.3
Subtract with 2 numbers less than 1000.	3.NBT.A.2 | 4.NBT.B.4
Practice seeing how one whole-number-times-fraction problem is the same as another. Find equivalent multiplication expressions.	4.NF.B.4
Practice finding equivalent fractions. These problems show you pictures of fractions to help you out.	4.NF.A.1
Practice solving division problems with 0s in the dividend (for example, 204÷4).	4.NBT.B.6
Practice solving division problems with 0s in the solution, or quotient.	4.NBT.B.6
RIT Range: 213-219	
Dividing whole numbers by unit fractions	5.NF.B.7 | 5.NF.B.7b

The Real and Complex Number Systems

Perform Operations

	Standards Alignment
RIT Range: 213-219	
Dividing unit fractions by whole numbers	5.NF.B.7 | 5.NF.B.7a
Dividing unit fractions by whole numbers introduction	5.NF.B.7 | 5.NF.B.7a
Dividing whole numbers by unit fractions introduction	5.NF.B.7 | 5.NF.B.7b
Fraction multiplication as scaling	5.NF.B.5b
RIT Range: 213-219	
Add two numbers that are written to the ones, tenths, or hundredths place.	5.NBT.B.7
Add two numbers that are either whole numbers or written to the tenths place value.	5.NBT.B.7
Practice adding fractions that have different denominators.	5.NF.A.1
Practice adding and subtracting mixed numbers with different denominators. No regrouping required.	5.NF.A.1
Challenge problems involving adding and subtracting fractions that have unlike denominators.	5.NF.A.1
Practice solving fraction addition and subtraction word problems. The fractions in these problems have unlike denominators.	5.NF.A.2
Practice adding and subtracting mixed numbers with different denominators. Regrouping required.	5.NF.A.1
Add tenths like 0.7 + 0.5	5.NBT.B.7
Add whole numbers and tenths like 4 + 5.7	5.NBT.B.7
Add larger numbers with tenths like 40.1+7.6	5.NBT.B.7
Add whole numbers, tenths, and hundredths like 60+2.57 or 5.53+3.1	5.NBT.B.7
Add more challenging whole numbers, tenths, and hundredths like 5.7+4.51 or 47.75+11.98	5.NBT.B.7
Add hundredths like 0.76+0.21	5.NBT.B.7
Divide numbers like 105÷21 or 119÷17	5.NBT.B.6
Divide two whole numbers to get a quotient with a decimal.	5.NBT.B.7
Divide a whole number by a number written to the tenths or hundredths place. Quotients are whole numbers.	5.NBT.B.7
Divide a whole number by a number written to the tenths or hundredths place. Quotients may include decimals.	5.NBT.B.7
Divide two numbers. Divisors, dividends, and quotients can include decimals written to the tenths or hundredths place.	5.NBT.B.7
Divide numbers like 2400÷30.	5.NBT.B.6

The Real and Complex Number Systems

Perform Operations

	Standards Alignment
RIT Range: 213-219	
Dividing whole numbers to get a decimal quotient like 15÷6=2.5	5.NBT.B.7
Dividing decimals by whole numbers like 2.5÷5 or 1.86÷2	5.NBT.B.7
Dividing decimals where we can factor a 10 out of the divisor like 9÷30	5.NBT.B.7
Dividing larger whole numbers by whole numbers to get a decimal like 80÷200	5.NBT.B.7
Dividing tenths by tenths like 0.6÷0.2.	5.NBT.B.7
Dividing numbers by 0.1 or 0.01 like 10÷0.1 or 5.3÷0.01	5.NBT.B.7
More challenging division with decimals like 14÷0.7 or 1.32÷0.12.	5.NBT.B.7
Divide 3-digit and 4-digit numbers by a 2-digit number without remainders.	5.NBT.B.6
Practice multiplying and dividing decimals by 10, 100, and 1000. For example, divide 31.4 by 100 to get 0.314.	5.NBT.A.2
Practice multiplying and dividing whole numbers by 10, 100, and 1000.	5.NBT.A.2
Multiply 2-3 digits by 3-4 digits with carrying.	5.NBT.B.5
Multiply a whole number times a decimal written to the tenths or hundredths place.	5.NBT.B.7
Multiply two numbers. Factors are written to the ones, tenths, or hundredths place.	5.NBT.B.7
Practice multiplying two fractions.	5.NF.B.4
Practice multiplying mixed numbers.	5.NF.B.4
Practice multiplying and dividing by powers of 10.	5.NBT.A.2
Practice multiplying and dividing decimal numbers by 10.	5.NBT.A.2
Multiply numbers like 900 x 1000	5.NBT.B.5
Multiply tenths like 0.6 x 0.4	5.NBT.B.7
Multiply decimals and whole numbers like 8x0.2 or 0.56x4	5.NBT.B.7
Multiply numbers with tenths and hundredths like 3.1x3.3 or 1.7x0.12	5.NBT.B.7
Solve and interpret fraction multiplication word problems.	5.NF.B.6
Practice evaluating powers of ten.	5.NBT.A.2
Round decimals and whole numbers to the nearest thousand, hundred, ten, one, tenth, or hundredth.	5.NBT.A.4
Round decimals using number lines. Select numbers that round to a given value.	5.NBT.A.4
Practice using a number line to round decimal numbers.	5.NBT.A.4

The Real and Complex Number Systems

Perform Operations

Standards Alignment

RIT Range: 213-219

Complete subtraction problems where both numbers are written to the hundredths place.	5.NBT.B.7
Complete subtraction problems where both numbers are written to the tenths place.	5.NBT.B.7
Practice subtracting fractions that have different denominators.	5.NF.A.1
Subtract tenths like 0.9-0.7	5.NBT.B.7
Subtract small whole numbers and tenths like 1.6-0.3	5.NBT.B.7
Subtract larger whole numbers and tenths like 78.4-3	5.NBT.B.7
Subtract trickier numbers with tenths like 56.8-17.9	5.NBT.B.7
Subtract hundredths like 0.75-0.56	5.NBT.B.7
Subtract small whole numbers, tenths, and hundredths like 0.6-0.43 or 1.58-0.5	5.NBT.B.7
Subtract larger whole numbers, tenths, and hundredths like 67.89-6 or 35.65-17.34	5.NBT.B.7
More challenging subtraction problems with whole numbers, tenths, and hundredths like 15-7.45 or 12.19-7.68	5.NBT.B.7
Give the number of tens a number is being multiplied or divided by when the decimal is moved to the left or right.	5.NBT.A.2
Practice understanding that the fraction bar really means division.	5.NF.B.3
Practice word problems that involve using the fraction bar as division.	5.NF.B.3
Use area models, number lines, and tape diagrams to multiply a whole number times a fraction.	5.NF.B.4
Use area models and tape diagrams to multiply a fraction times a fraction.	5.NF.B.4
Practice adding and subtracting fractions that have different denominators. Problems have fraction diagrams.	5.NF.A.1

RIT Range: 220-223

Practice solving word problems by adding or subtracting decimal numbers.	6.NS.B.3
Practice adding two numbers that are written to the tenths, hundredths, or thousandths place.	6.NS.B.3
Practice applying the distributive property to factor numerical expressions (no variables).	6.NS.B.4

Practice dividing decimal numbers using "long division".	6.NS.B.3
Practice dividing fractions by fractions. No negative numbers are used in this exercise.	6.NS.A.1
Practice solving word problems by dividing fractions by fractions.	6.NS.A.1

The Real and Complex Number Systems

Perform Operations

	Standards Alignment
RIT Range: 220-223	
Practice dividing multi-digit whole numbers. These problems use remainders.	6.NS.B.2
Solve word problems where you either need to find the GCF or LCM.	6.NS.B.4
Find the greatest common factor of 2 or 3 integers.	6.NS.B.4
Find the lcm (least common multiple) of pairs of integers.	6.NS.B.4
Practice multiplying two numbers that are written to the tenths, hundredths, or thousandths place.	6.NS.B.3
Practice subtracting two numbers that are written to the tenths, hundredths, or thousandths place.	6.NS.B.3
Understanding dividing fractions by fractions	6.NS.A.1
RIT Range: 224-227	
Practice adding and subtracting positive and negative fractions.	7.NS.A.1
Practice subtracting positive and negative single-digit numbers.	7.NS.A.1
Practice adding positive and negative single-digit numbers.	7.NS.A.1
Practice solving word problems with negative numbers.	7.NS.A.1
Practice comparing decimals, percents, fractions, and mixed numbers.	7.NS.A.2
Practice simplifying complex fractions.	7.NS.A.3
Practice converting a fraction to a decimal.	7.NS.A.2
Practice dividing mixed numbers. Numbers in these problems may be positive or negative.	7.NS.A.2
Practice raising positive and negative numbers (integers only) to whole number powers. Watch out for mischievous negative signs that aren't really part of the base!	7.NS.A.2
Practice raising fractions to whole number powers. Fractions in these problems may be positive or negative.	7.NS.A.2
Practice classifying numbers as whole, integer, rational, and irrational.	7.NS.A.3
Practice finding the missing value in an addition or subtraction equation involving negative numbers.	7.NS.A.1
Practice solving addition and subtraction problems with negative numbers.	7.NS.A.1
Practice plugging in values to evaluate negative number addition and subtraction expressions.	7.NS.A.1
Practice multiplying and dividing integers.	7.NS.A.2
Practice writing addition and subtraction equations to match number line diagrams.	7.NS.A.1

The Real and Complex Number Systems

Perform Operations

Standards Alignment

RIT Range: 224-227

Practice identifying equivalent expressions involving the addition and subtraction of negative numbers.	7.NS.A.1
Practice matching addition and subtraction equations to real-world scenarios.	7.NS.A.1
Practice matching situations to multiplication and division expressions and equations.	7.NS.A.2
Practice evaluating expressions using the order of operations. Numbers used in these problems may be negative.	7.NS.A.2
Practice determining whether the sum of two numbers is positive, negative, or zero.	7.NS.A.1
Practice working through addition and subtraction problems using the number line.	7.NS.A.1
Practice solving challenging negative number addition and subtraction problems. Number line models, variables, and absolute value come together to push your knowledge of negative numbers even deeper (maybe even below zero!).	7.NS.A.1

RIT Range: > 231

Practice addition and subtraction with complex numbers.	HSN-CN.A.2
Simplify expressions with base i (the imaginary unit) raised to a positive exponent.	HSN-CN.A.1 | HSN-CN.A.2
Multiply complex numbers by single terms that are either real or pure imaginary.	HSN-CN.A.2
Given two complex numbers, find their product.	HSN-CN.A.2
Determine the real and the imaginary parts of complex numbers	HSN-CN.A.1
Rewrite square roots of negative numbers as imaginary numbers.	HSN-CN.A.1
Classify numbers as real, pure imaginary, or complex.	HSN-CN.A.1
Determine the appropriate unit of a quantity based on a formula containing that quantity.	HSN-Q.A.1

The Real and Complex Number Systems

Ratios and Proportional Relationships

Standards Alignment

RIT Range: 203-212

Multi-step word problems with whole numbers	4.OA.A.3

RIT Range: 203-212

The Real and Complex Number Systems

Ratios and Proportional Relationships

	Standards Alignment
RIT Range: 203-212	
Practice converting a US customary measure of volume to a smaller unit.	4.MD.A.1
Practice converting a metric measure of mass to a smaller unit.	4.MD.A.1
Practice converting a US customary measure of length to a smaller unit.	4.MD.A.1
Practice converting a metric measure of volume to a smaller unit.	4.MD.A.1
Practice converting a metric measure of length to a smaller unit.	4.MD.A.1
Practice converting a US customary measure of mass to a smaller unit.	4.MD.A.1
Practice estimating the volume of real life objects using US customary	4.MD.A.1
Practice converting a measure of time to a smaller unit.	4.MD.A.1
Solve word problems that involve converting between U.S. dollars and cents and converting U.S. dollars to other units of money, like pesos.	4.MD.A.2
Solve word problems to find what time an event occurred or how long an event lasted.	4.MD.A.2
Practice estimating the length of an event using seconds, minutes, and hours.	4.MD.A.1
RIT Range: 213-219	
Solve word problems that involve converting between metric measures of distance, volume, and mass, as well as measures of time.	5.MD.A.1
Convert between metric measures of distance, volume, and mass.	5.MD.A.1
Convert between US customary measures of distance, volume, and mass.	5.MD.A.1
Solve word problems that involve converting between US customary measures of distance, volume, and mass.	5.MD.A.1
RIT Range: 221 - 225	
Units	6.RP.A.3 | 6.RP.A.3d
RIT Range: 220-223	
Example problem: Three different stores are offering a deal on pencils. Which store has the lowest price per pencil?	6.RP.A.2 | 6.RP.A.3
Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part and the percent.	6.RP.A.3
Practice solving word problems involving percents.	6.RP.A.3
Use rates to solve word problems. For example, Charlie can type 675 words in 9 minutes. How many words can Charlie type in 13 minutes?	6.RP.A.2 | 6.RP.A.3

The Real and Complex Number Systems

Ratios and Proportional Relationships

	Standards Alignment
RIT Range: 220-223	
Practice solving ratio word problems like, "If Ben reads 10 pages in 15 minutes, how long does it take him to read 40 pages?"	6.RP.A.3
Choose the ratio that goes with a picture of two quantities like apples and bananas.	6.RP.A.1
Practice filling out tables of equivalent ratios.	6.RP.A.3
RIT Range: 224-227	
Practice telling whether or not the relationship between two quantities is proportional by reasoning about equivalent ratios.	7.RP.A.2
Practice telling whether or not the relationship between two quantities is proportional by looking at a graph of the relationship.	7.RP.A.2
Practice setting up and solving proportions to solve word problems.	7.RP.A.3
Practice solving word problems involving price discounts, taxes, and tip calculations.	7.RP.A.3
Practice reading and analyzing graphs of proportional relationships.	7.RP.A.2
Practice solving word problems involving price markups and commission fees.	7.RP.A.3
Practice solving basic proportions.	7.RP.A.3
Practice computing rates associated with ratios of fractions or decimals.	7.RP.A.1 | 7.RP.A.2
Practice writing proportions to describe real-world situations.	7.RP.A.3
Practice writing equations to describe proportional relationships.	7.RP.A.2