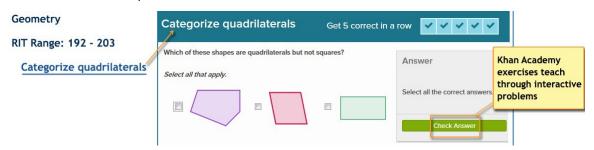


# MAP to Khan Academy:

Khan Academy Practice Exercises Correlated to RIT for Common Core Math MAP Grades 2-5

#### **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 2015 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.
  - 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**

These Terms of Use permit you to use this document for your personal, non-commercial use only. You must not reproduce, distribute, modify, create derivative works of, publicly display, publicly perform, republish, download, store or transmit any of the material on this document, except you may print or download one copy of a reasonable number of pages of this document for your own personal, non-commercial use and not for further reproduction, publication or distribution. You must not modify copies of this document. You must not delete or alter any copyright, trademark or other proprietary rights notices from this document. If you breach the Terms of Use your right to use the document will cease immediately and you must, at NWEA's option, return or destroy any copies of the document you have made. No right, title or interest in or to the document or any content on the document is transferred to you, and all rights not expressly granted are reserved by NWEA or their respective owner (see below). Any use of the document not expressly permitted by these Terms of Use is a breach of these Terms of Use and may violate copyright, trademark and other laws.

This document contains links to Khan Academy® sites, materials and/or resources ("Khan Materials"). NWEA's use of the Khan Materials is by license. Khan Academy® is the respective owner of the Khan Materials. NWEA's use of the Khan Materials in no way represents or suggests that Khan Academy® endorses NWEA. All Khan Academy content is available for free at www.khanacademy.org.

The Khan Materials are provided for your convenience only. NWEA has no control over the contents of the Khan Materials and accepts no responsibility for them or for any loss or damage that may arise from your use of them. The information contained in this document, including the Khan Materials, are provided "as-is" and "as available" without any warranty of any kind, express or implied. NWEA does not warrant the accuracy, completeness or usefulness of the Khan Materials or any other information in this document and NWEA expressly disclaims all liability and responsibility arising from any reliance placed on the Khan Materials, you do so entirely at your own risk and subject to the terms and conditions of use for the Khan Materials.

NWEA disclaims all warranties of any kind, whether express or implied, statutory or otherwise, including but not limited to any warranties of merchantability, non-infringement and fitness for particular purpose. In no event will NWEA be liable for damages of any kind, under any legal theory, arising out of or in connection with your use, or inability to use, this document and/or the information contained within it, including any direct, indirect, special, consequential, incidental or punitive damages. Any dispute or claim arising from or related to this document shall be governed and construed with the laws of the State or Oregon and any suit or action arising out of this document shall be instituted exclusively in the court of the State of Oregon and County of Multnomah.

The Khan Academy® is a registered trademark of Khan Academy. MAP® is a registered trademark of Northwest Evaluation Association. You must not use such marks without the prior written permission of their respective owners. NWEA may update the content on this document from time to time, but its content is not necessarily complete or up-to-date. Any of the material in this document may be out of date at any given time, and NWEA is under no obligation to update such material. However, in the event NWEA, in its sole discretion updates this document, your continued use of it following the posting of revised Terms of Use means that you accept and agree to the changes.

# Common Core MAP Mathematics Khan Academy Practice Exercises Correlation Common Core Mathematics 2-5

G	e	0	m	e	tı	ſy
---	---	---	---	---	----	----

Reason with Shapes, Attributes, & Coordinate Plane	P 4
Measurement and Data	
Geometric Measurement and Problem Solving	P 6
Represent and Interpret Data	P 10
Number and Operations	
Number and Operations - Fractions	P 12
Number and Operations in Base Ten	P 15
Understand Place Value, Counting, and Cardinality	P 21
Operations and Algebraic Thinking	
Analyze Patterns and Relationships	P 24
Represent and Solve Problems	P 25

# **Geometry**

Reason with Shapes, Attributes, & Coordinate Plane	Standards Alignment	
RIT Range: < 160		
<u>Practice comparing shapes based on their number of sides, number of corners, and side-lengths.</u>	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	
Practice more challenging problems identifying circles, triangles, squares, and rectangles.	K.G.A.2	
Decide if objects are above, below, beside, in front of, or behind other objects.	K.G.A.1	
RIT Range: 161-178		
Practice identifying circles, triangles, squares, rectangles, rhombuses, trapezoids, and hexagons.	1.G.A.1	
Practice dividing shapes into 2 or 4 equal sections.	1.G.A.3	
RIT Range: 179-191		
Practice telling if shapes are divided into 2 or 4 equal sections.	2.G.A.3	
Practice identifying quadrilaterals, pentagons, hexagons, and octagons.	2.G.A.1	
RIT Range: 192-202		
Classify and compare rectangles, rhombuses, and squares.	3.G.A.1	
Identify unit fractions when given a visual or a context.	3.G.A.2	
Practice telling if a shape has been divided into equal parts.	3.G.A.2	
RIT Range: 203-212		
Determine if an angle is acute, right, or obtuse. A protractor is provided.	4.G.A.1	
Practice identifying lines of symmetry on shapes.	4.G.A.3	
Classify shapes based on pictures or attributes, such as angle types and side-lengths.	4.G.A.2	
Draw rays, lines, and line segments with given points.	4.G.A.1	

# **Geometry**

Reason with Shapes, Attributes, & Coordinate Plane	Standards Alignment		
RIT Range: 203-212			
Practice drawing lines of symmetry and creating symmetrical figures.	4.G.A.3		
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 identifying triangles by their angles as acute, right, or obtuse.	4.G.A.2		
Practice identifying symmetrical shapes.	4.G.A.3		
Identify quadrilaterals based on pictures or attributes. Quadrilaterals included are parallelograms, rhombuses, rectangles, and squares.	4.G.A.2   4.G.A.2		
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   4.G.A.1		
Recognize parallel and perpendicular lines in geometric figures and pictures.	4.G.A.1		
<u>Practice identifying triangles by their side-lengths as equilateral, isosceles, or scalene.</u>	4.G.A.2		
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.1   5.G.A.2		
Plot a given point on the coordinate plane.	5.G.A.1   5.G.A.2		
Identify points in the first quadrant of a coordinate plane.	5.G.A.1		
Identify and compare shapes based on their attributes. Shapes include triangle types, quadrilateral types, pentagons, and hexagons.	5.G.B.3   5.G.B.4		
Identify and graph corners on shapes graphed in the first quadrant of a coordinate plane.	5.G.A.1   5.G.A.2		
RIT Range: 220-223			
Practice drawing shapes on the coordinate plane.	6.G.A.3		

2.MD.A.3

2.MD.B.5

## **Geometry**

Reason with Shapes, Attributes, & Coordinate Plane	Standards Alignment
RIT Range: 220-223	
More challenging problems involving drawing shapes on the coordinate plane.	6.G.A.3
Practice graphing points like (-2, 4) on a coordinate plane.	6.NS.C.6
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 reflecting points across axes on the xy coordinate plane.	6.NS.C.8
RIT Range: 224-227	
Match 3D objects with their 2D cross-sections.	7.G.A.3
Measurement and Data	
Geometric Measurement and Problem Solving	Standards Alignment
RIT Range: < 160	
Practice comparing 2 objects to see which is bigger, smaller, taller, shorter, or longer.	K.MD.A.2
RIT Range: 161-178	
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
Practice telling time on analog clocks to the hour or half hour.	1.MD.B.3
RIT Range: 179-191	
Practice adding and subtracting using the number line. Numbers used are 100 or less.	2.MD.B.6

Sal estimates lengths using units of inches, feet, centimeters, and meters.

Add and subtract lengths to solve word problems.

Geometric Measurement and Problem Solving	Standards Alignment
RIT Range: 179-191	
Measure objects using a ruler.	2.MD.A.1
Tell time on unlabeled analog clocks.	2.MD.C.7
Tell time on labeled analog clocks.	2.MD.C.7
RIT Range: 192-202	
Find the area of shapes by counting the unit squares inside them.	3.MD.C.5   3.MD.C.6
Use area models to represent the distributive property in finding area of rectangles.	3.MD.C.7
Find area of rectangles and squares by multiplying side lengths.	3.MD.C.7
Compare the areas and perimeters of rectangles when given a context or picture.	3.MD.D.8
Compare the areas of rectangles represented in images or contexts.	3.MD.C.7
Practice decomposing figures into rectangles to find area. Some figures are on grids.	3.MD.C.7
Practice decomposing irregular shapes to find their area.	3.MD.C.7
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
Practice finding a missing side length on a rectangle when given the other side length and the area.	3.MD.C.7
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
Find area of rectangles by multiplying side-lengths.	3.MD.C.7
Solve word problems involving mass. Estimate the mass of items.	3.MD.A.2
Practice measuring the side-lengths of a rectangle to find its area.	3.MD.C.7
Practice measuring side lengths to find perimeter.	3.MD.D.8

Geometric Measurement and Problem Solving	Standards Alignment		
RIT Range: 192-202			
Count unit squares and partial unit squares to find the area of shapes.	3.MD.C.6		
Calculate the perimeter of a rectangle from its side lengths.	3.MD.D.8		
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		
Practice telling time using analog clocks. Some clocks do not have labels.	3.MD.A.1		
Solve a word problem to find the duration of an event. Both analog or digital clocks are included.	3.MD.A.1		
Use a number line to solving time word problems.	3.MD.A.1		
Practice finding the difference between times given on two analog clocks.  Each time difference is less than 60 minutes, and the hour hand stays on the same hour.	3.MD.A.1		
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			
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		
Estimate the size of angles when given a picture or a situation.	4.MD.C.5		
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		

Geometric Measurement and Problem Solving	Standards Alignment		
RIT Range: 203-212			
Use a protractor to construct angles.	4.MD.C.6		
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 units.	4.MD.A.1		
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		
Practice finding the difference between times given on two analog clocks.  Time differences cross over the hour.	4.MD.A.2		
Practice estimating the length of an event using seconds, minutes, and hours.	4.MD.A.1		
RIT Range: 213-219			
Practice measuring angles using a circle protractor, solve problems about angles as part of a circle.	5.MD.C.5		
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		

Geometric Measurement and Problem Solving	Standards Alignment			
RIT Range: 213-219				
Find the volume of irregular 3D figures by dividing the figures into rectangular prisms and finding the volume of each part.	5.MD.C.5			
Find volume of a rectangular prism with labeled side lengths. Find a missing side length on a rectangular prism when given the volume.	5.MD.C.5			
Find volume of rectangular prisms to solve word problems.	5.MD.C.5			
Find volume of 3-dimensional figures by counting unit cubes.	5.MD.C.5			
Practice problems that help you see why the volume formula makes sense.	5.MD.C.5			
Recognize volume as an attribute of solid figures and understand concepts of volume measurement.	5.MD.C.4   5.MD.C.5			
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.	6.G.A.1			
<u>Practice finding the areas of complex shapes that are composed of smaller shapes.</u>	6.G.A.1			
Practice finding the areas of triangles and quadrilaterals on grids.	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 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			

Practice counting to see which group has the most things in it.

**Measurement and Data** 

**Represent and Interpret Data** 

RIT Range: < 160

**Standards Alignment** 

K.MD.B.3

Represent and Interpret 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	
Practice creating picture graphs (pictographs) 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: 192-202		
Create a bar graph with the data given.	3.MD.B.3	
Record measurements on line plots (also called dot plots).	3.MD.B.4	
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	
Practice reading and interpreting data that is graphed on line plots. The data graphed includes fractions.	3.MD.B.4	
Interpret bar graphs to answer questions about a context.	3.MD.B.3	
Use picture graphs to solve word problems.	3.MD.B.3	
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	

К	epresent and Interpret Data	Standards Alignment
R	T Range: 220-223	
	Practice reading information presented in box plots.	6.SP.B.4
	Practice reading basic dot plots and frequency tables.	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 reading and interpreting histograms.	6.SP.B.4

Number and Operations - Fractions	Standards Alignment			
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.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			
Locate 1 on a number line labeled with 0 and a unit fraction.	3.NF.A.2			
Plot and spot fractions on the number line.	3.NF.A.2			
Use unit fractions to think about the location of other fractions on the number line.	3.NF.A.2			
Identify the fraction of a whole that is shaded.	3.NF.A.1			
Practice identifying numerators and denominators in fractions.	3.NF.A.1			

Number and Operations - Fractions	Standards Alignment
RIT Range: 192-202	
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.NF.A.1
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 comparing decimals and fractions. Decimals and fractions in these problems are limited to tenths and hundredths for easier comparison.	4.NF.C.7
Practice rewriting fractions to have the same denominator.	4.NF.A.2
Practice comparing decimals. Decimals in these problems are limited to tenths and hundredths.	4.NF.C.7
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
Practice comparing decimals with the help of visual aids.	4.NF.C.7
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 finding decimal numbers on the number line. Decimals are limited to tenths in these problems.	4.NF.C.6
Practice finding decimal numbers on the number line. Decimals are limited to hundredths.	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

Number and Operations - Fractions	Standards Alignment
RIT Range: 203-212	
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 using the same whole to find equivalent fractions.	4.NF.A.2
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 these problems to see how decimals and fractions can represent the same number.	4.NF.C.6
Practice matching fraction diagrams to multiplication expressions.	4.NF.B.4
Practice ordering 3 fractions from least to greatest.	4.NF.A.2
Solve a subtraction problem with two fractions with like denominators.	4.NF.B.3
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
<u>Practice comparing fractions by looking at pictures. Fractions in these problems do not have common denominators.</u>	4.NF.A.2
RIT Range: 213-219	
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

Number and Operations - Fractions	Standards Alignment
RIT Range: 213-219	
Practice adding and subtracting mixed numbers with different denominators. Regrouping required.	5.NF.A.1
Practice dividing a whole number by a unit fraction.	5.NF.B.7
Divide a unit fraction by a whole number.	5.NF.B.7
Practice dividing unit fractions by whole numbers with visual models.	5.NF.B.7
Learn how to divide whole number by unit fractions with visual models.	5.NF.B.7
Fraction multiplication as scaling	5.NF.B.5b
Practice multiplying two fractions.	5.NF.B.4
Practice multiplying mixed numbers.	5.NF.B.4
Solve and interpret fraction multiplication word problems.	5.NF.B.6
Practice subtracting fractions that have different denominators.	5.NF.A.1
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	5.NF.B.4
number times a fraction.	
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 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
Understanding dividing fractions by fractions.	6.NS.A.1

# Number and Operations in Base Ten

© Northwest Evaluation Association February 2017

**Number and Operations** 

**Standards Alignment** 

Number and Operations in Base Ten	Standards Alignment
RIT Range: 161-178	
Practice solving problems like 34 + 5 and 34 + 50.	1.NBT.C.4
Practice solving problems like 34 + 1 and 34 + 10.	1.NBT.C.4   1.NBT.C.5
Practice solving problems like 24 + 45.	1.NBT.C.4
Practice breaking apart problems like $23 + 45$ into problems like $20 + 40 + 3 + 5$ .	1.NBT.C.4
Practice adding numbers like 45 + 8.	1.NBT.C.4
RIT Range: 179-191	
<u>Practice adding and subtracting numbers like 554 and 237 using a number line.</u> 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 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
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
Regrouping: two-digit number minus one-digit number	2.NBT.A.4
Practice telling which strategies work for adding two numbers within 100.	2.NBT.B.7
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

Number and Operations in Base Ten	Standards Alignment
RIT Range: 179-191	
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: 192-202	
Practice adding three-digit numbers. All sums are 1000 or less.	3.NBT.A.2   4.NBT.B.4
Practice making groups of 10 and 100 while adding 3-digit numbers.	3.NBT.A.2
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	3.NBT.A.3
to multiply.	
Subtract with 2 numbers less than 1000.	3.NBT.A.2   4.NBT.B.4
RIT Range: 203-212	
Practice adding three-digit numbers. All sums are 1000 or less.	3.NBT.A.2   4.NBT.B.4
Learn to cancel zeros when dividing numbers like 3000 and 50.	4.NBT.B.6
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 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 or	4.NBT.B.5
<u>carrying.</u>	
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)	4.NBT.B.5
needed.	
Multiply a 1-digit number by a multi-digit number by decomposing the multi-digit number.	4.NBT.B.5
Practice multiplication problems like 5 x 100 = 500.	4.NBT.B.5

Number and Operations in Base Ten	Standards Alignment
RIT Range: 203-212	
Practice multiplication problems like 5 x 500 = 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 multiplying 2-digit multiples of 10, such as 50 x 70 = 3500.	4.NBT.B.5
Practice division problems that work out to multiples of ten. Example: $1200 \div 30 = 40$ .	4.NBT.B.6
Subtract with 2 numbers less than 1000.	3.NBT.A.2   4.NBT.B.4
Practice solving division problems with 0s in the dividend (for example, $204 \div 4$ ).	4.NBT.B.6
Practice solving division problems with 0s in the solution, or quotient.	4.NBT.B.6
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
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

## **Number and Operations in Base Ten**

#### **Standards Alignment**

RIT Range: 213-219

Range: 213-219	
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
Dividing whole numbers to get a decimal quotient like $15 \div 6 = 2.5$	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 $9 \div 30$	5.NBT.B.7
Dividing larger whole numbers by whole numbers to get a decimal like $80 \\  \div 200$	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 $10 \div 0.1$ or $5.3 \div 0.01$	5.NBT.B.7
More challenging division with decimals like $14 \div 0.7$ or $1.32 \div 0.12$ .	5.NBT.B.7
<u>Divide 3-digit and 4-digit numbers by a 2-digit number without</u> remainders.	5.NBT.B.6
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
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 8 x 0.2 or 0.56 x 4	5.NBT.B.7
Multiply numbers with tenths and hundredths like 3.1 x 3.3 or 1.7 x 0.12	5.NBT.B.7
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

Number and Operations in Base Ten	Standards Alignment
RIT Range: 213-219	
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
<u>Subtract larger whole numbers, tenths, and hundredths like 67.89 - 6 or 35.65 - 17.34</u>	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
RIT Range: 220-223	
Practice adding two numbers that are written to the tenths, hundredths, or thousandths place.	6.NS.B.3
Practice dividing decimal numbers using "long division".	6.NS.B.3
Practice dividing multi-digit whole numbers. These problems use remainders.	6.NS.B.2
Practice multiplying two numbers that are written to the tenths, hundredths, or thousandths place.	6.NS.B.3
Practice taking exponents of whole numbers. All exponents in these problems are either positive or zero.	6.EE.A.1
Practice subtracting two numbers that are written to the tenths, hundredths, or thousandths place.	6.NS.B.3
RIT Range: 224-227	
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

K.CC.B.5

## **Number and Operations**

### Number and Operations in Base Ten Standards Alignment

RIT Range: 224-227

<u>Practice finding the missing value in an addition or subtraction equation</u>

7.NS.A.1 involving negative numbers.

<u>Practice solving addition and subtraction problems with integers (positive</u> 7.NS.A.1 and negative numbers).

<u>Practice writing addition and subtraction equations to match number line</u> 7.NS.A.1 diagrams.

Practice working through addition and subtraction problems using the number line.

7.NS.A.1

## **Number and Operations**

#### Understand Place Value, Counting, and Cardinality Standards Alignment

RIT Range: < 160

Practice counting which group has more objects.

K.CC.C.6

<u>Practice saying if one number is less than or greater than another</u> number. Numbers are between 0 and 10.

Find the missing number in a list of numbers. Numbers used are 20 or less. K.CC.A.2

Practice counting objects in pictures.

K.CC.B.4

Practice counting up to 10 objects.

K.CC.B.5

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

<u>Practice counting up to 20 objects. Objects are organized neatly into rows</u> K.CC.B.5 and columns.

Practice counting up to 20 objects in random patterns.

ractice counting up to 20 objects in random patterns.

Practice thinking of teen numbers as a ten plus some ones.

K.NBT.A.1

RIT Range: 161-178

Practice comparing numbers (within 100) using the symbols <, >, and =. 1.NBT.B.3

Practice more challenging problems comparing numbers within 100. 1.NBT.B.3

Understand Place Value, Counting, and Cardinality	Standards Alignment
RIT Range: 161-178	
Practice grouping objects by tens.	1.NBT.B.2
Practice finding missing numbers in a list of numbers between 0 and 120.	1.NBT.A.1
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
Find the total value when given an amount of coins or dollars.	2.NBT.A.2
Practice thinking about place value of 3-digit numbers as hundreds, tens, and ones.	2.NBT.A.1
Practice counting by 100s.	2.NBT.A.2
Practice counting by 10s.	2.NBT.A.2
Practice counting by 5s.	2.NBT.A.2
Practice breaking numbers into hundreds, tens, and ones.	2.NBT.A.3
RIT Range: 192-202	
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
RIT Range: 203-212	
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 dividing whole numbers by 10.	4.NBT.A.1
Practice multiplying and dividing whole numbers by ten.	4.NBT.A.1
Practice multiplying whole numbers by 10.	4.NBT.A.1

Understand Place Value, Counting, and Cardinality	Standards Alignment
RIT Range: 203-212	
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 thinking about the value of each digit in a number.	4.NBT.A.2
Practice using place value blocks.	4.NBT.A.1
Practice rounding whole numbers to the nearest hundred or thousand.	4.NBT.A.3
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
RIT Range: 213-219	
Compare 2 numbers to thousandths based on meanings of the digits in each place.	5.NBT.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
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
Practice multiplying and dividing by powers of 10.	5.NBT.A.2
Practice multiplying and dividing decimal numbers by 10.	5.NBT.A.2
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

#### **Understand Place Value, Counting, and Cardinality**

**Standards Alignment** 

RIT Range: 213-219

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 identifying the value of one of the digits in a decimal number. For 5.NBT.A.1 example, the 3 in 4.563 has a value of 0.003.

RIT Range: 220-223

Practice putting positive and negative numbers in order. For example, -28, 12, -51, and 43.

6.NS.C.7

Practice comparing positive and negative numbers by thinking about their 6.NS.C.7 positions on the number line. Numbers to the right are greater than

numbers to the left.

## **Operations and Algebraic Thinking**

**Standards Alignment** 

RIT Range: 192-202

<u>Identify arithmetic patterns (including ones in the addition or</u> multiplication tables), and explain them using properties of operations. 3.OA.D.9

Practice discovering and explaining patterns in multiplication tables.

3.OA.D.9

RIT Range: 203-212

Identify composite numbers less than 100.

4.OA.B.4

Practice finding factor pairs for whole numbers.

4.OA.B.4

Demonstrate understanding of factors and multiples.

4.OA.B.4

Generate terms in a pattern when given a rule. Identify features of a

4.OA.C.5

pattern that are not explicit to the rule itself.

4.OA.B.4

Identify prime numbers less than 100.

RIT Range: 213-219

Generate patterns using given rules. Identify relationships between terms. Graph ordered pairs consisting of corresponding terms from the 5.OA.B.3

patterns.

#### Analyze Patterns and Relationships Standards Alignment

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

Practice figuring out if a variable is dependent or independent.

6.EE.C.9

Practice applying the distributive property to factor numerical expressions (no variables).

6.NS.B.4

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

<u>Use rates to solve word problems. For example, Charlie can type 675</u>
words in 9 minutes. How many words can Charlie type in 13 minutes?

<u>Practice solving ratio word problems like, "If Ben reads 10 pages in 15 minutes, how long does it take him to read 40 pages?"</u>

Practice filling out tables of equivalent ratios.

6.RP.A.3

RIT Range: 224-227

Practice computing rates associated with ratios of fractions or decimals.

7.RP.A.1

## **Operations and Algebraic Thinking**

#### Represent and Solve Problems Standards Alignment

RIT Range: < 160

you out.

Add small numbers. All answers are five or less.

K.OA.A.5

<u>Practice solving word problems by adding small numbers (numbers 10 or less).</u>

Practice adding numbers to make 5.

K.OA.A.4

Practice adding numbers to make 10. These problems show grids to help K.OA.A.4

Practice adding numbers to make 10.

K.OA.A.4

<u>Practice making a number by adding other numbers. All numbers in these</u> K.OA.A.3 problems are less than 10.

Represent and Solve Problems	Standards Alignment
RIT Range: < 160	
Practice adding by "putting together" (with numbers less than 10).	K.OA.A.1
Subtract small numbers. All answers are less than 5.	K.OA.A.5
Practice solving word problems by subtracting small numbers (numbers 10 or less).	K.OA.A.2
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.	1.0A.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 telling which equation is true.	1.OA.D.7
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
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	
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

Represent and Solve Problems	Standards Alignment
RIT Range: 179-191	
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
Add and subtract lengths to solve word problems.	2.OA.A.1
Practice solving word problems by adding the same number many times.	2.OA.C.4
Read and interpret picture graphs.	2.OA.A.1
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 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

Represent and Solve Problems	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 basic division using various visuals, such as arrays.	3.OA.A.2
Basic division. Divide two numbers. Quotients are equal to or less than	3.OA.A.4
<ul><li>10.</li><li>1-digit division. Divide two numbers. Quotients are equal to or less than</li><li>10.</li></ul>	3.OA.A.4
Practice solving for unknown letters and symbols in equations.	3.OA.B.6
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 two 1-digit numbers. Some problems include multiplying by 10.	3.OA.A.4
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 multiplying 1-digit numbers using arrays.	3.OA.A.1
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

Represent and Solve Problems	Standards Alignment
RIT Range: 192-202	
Solve two-step word problems with addition, subtraction, multiplication, and division. Some questions include estimation.	3.OA.D.8
RIT Range: 203-212	
<u>Practice solving multiplication and division word problems. Some problems have remainders.</u>	4.OA.A.2
Rewrite multiplication equations as comparisons and comparisons as equations.	4.OA.A.1
Select the equation that can be used to solve a word problem.	4.OA.A.1
Solve multi-step word problems, including estimation. Select the equation that can be used to solve a word problem.	4.OA.A.3
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
Practice changing expressions from words to math.	5.OA.A.2
RIT Range: 220-223	
Practice solving word problems by adding or subtracting decimal numbers.	6.NS.B.3
Practice writing basic equations to model real-world situations.	6.EE.B.7
<u>Practice spotting the mistake in someone else's work as they attempt to solve one-step equations.</u>	6.EE.B.7
<u>Practice writing inequalities with variables to describe real-world</u> <u>situations.</u>	6.EE.B.8
Practice solving equations in one step by multiplying or dividing a value from both sides.	6.EE.B.7
Practice solving equations in one step by adding or subtracting the same value from both sides.	6.EE.B.7

## **Represent and Solve Problems Standards Alignment** RIT Range: 220-223 6.EE.B.7 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 Practice solving equations in one step by multiplying or dividing a number from both sides. These problems involve decimals and fractions. 6.EE.B.5 Practice plugging in values to equations and checking to see if the equations hold true. Practice plugging in values to inequalities and checking to see if the 6.EE.B.8 inequalities hold true. RIT Range: 224-227 7.EE.A.2 **Practice interpreting linear expressions** 7.EE.B.4 Practice writing equations to model and solve real-world situations.