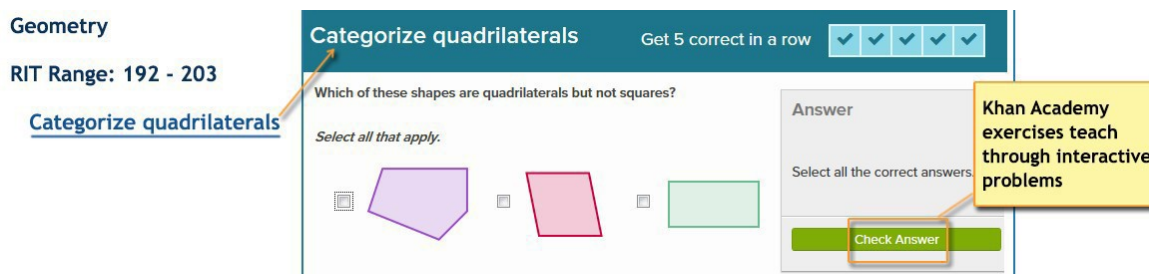# MAP Growth Mathematics to Khan Academy

## Khan Academy Practice Exercises Correlated to RIT

## Common Core MAP Growth Math K-2

### About this Document

This document correlates MAP® Growth™ test sub-goals and RIT ranges to Khan Academy® exercises. The Khan Academy 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 Growth 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 Growth 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:
   - 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 Growth.

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 Growth data should be used as one of many data points for instructional decisions rather than as a placement guide.

## Terms of Use

# MAP Growth Mathematics
# Khan Academy Practice Exercises Correlation

## Common Core Math K-2

# Operations and Algebraic Thinking

Represent and Solve Problems                                    Standards Alignment

RIT Range:  <160

| | |
|---|---|
| Add within 10 | K.OA.A.1 |
| Subtract within 10 | K.OA.A.1 |
| Addition word problems within 10 | K.OA.A.2 |
| Subtraction word problems within 10 | K.OA.A.2 |
| Making small numbers in different ways | K.OA.A.3 |
| Make 10 | K.OA.A.4 |
| Make 10 (grids and number bonds) | K.OA.A.4 |
| Making 5 | K.OA.A.4 |

RIT Range:  161-178

| | |
|---|---|
| Addition and subtraction word problems 1 | 1.OA.A.1 |
| Addition and subtraction word problems 2 | 1.OA.A.1 |
| Word problems with "more" and "fewer" | 1.OA.A.1 |
| Word problems with "more" and "fewer" 1 | 1.OA.A.1 |
| Word problems with "more" and "fewer" 2 | 1.OA.A.1 |
| Add 3 numbers | 1.OA.A.2 |

RIT Range:  179-191

| | |
|---|---|
| Add and subtract within 100 word problems 1 | 2.OA.A.1 |
| Add and subtract within 100 word problems 2 | 2.OA.A.1 |
| Add and subtract within 100 word problems 3 | 2.OA.A.1 |
| Challenging add and subtract word problems (within 100) | 2.OA.A.1 |
| Find the missing number (add and subtract within 100) | 2.OA.A.1 |
| Length word problems | 2.OA.A.1 |
| Solve problems with picture graphs 1 | 2.OA.A.1 |
| Repeated addition | 2.OA.C.4 |

# Operations and Algebraic Thinking

Represent and Solve Problems                                    Standards Alignment

RIT Range:  192-202

| | |
|---|---|
| Meaning of multiplication | 3.OA.A.1 |
| Multiply with arrays | 3.OA.A.1 |
| Divide with visuals | 3.OA.A.2 |
| Meaning of division | 3.OA.A.2 |
| Multiplication and division word problems (within 100) | 3.OA.A.3 |
| Relate division to multiplication word problems | 3.OA.A.3 |
| Basic multiplication | 3.OA.A.4 |
| Find missing divisors and dividends (1-digit division) | 3.OA.A.4 |
| Find missing factors (1-digit multiplication) | 3.OA.A.4 |
| Letters and symbols in multiplication and division equations | 3.OA.A.4 |
| 2-step estimation word problems | 3.OA.D.8 |
| 2-step word problems | 3.OA.D.8 |
| Represent 2-step word problems with equations | 3.OA.D.8 |
| Math patterns 1 | 3.OA.D.9 |
| Patterns in multiplication tables | 3.OA.D.9 |
| Patterns with even and odd | 3.OA.D.9 |

# Operations and Algebraic Thinking

| Properties of Operations | Standards Alignment |
|---|---|

**RIT Range: <160**

| | |
|---|---|
| Add within 5 | K.OA.A.5 |
| Subtract within 5 | K.OA.A.5 |

**RIT Range: 161-178**

| | |
|---|---|
| Relate addition and subtraction | 1.OA.B.4 |
| Add within 20 | 1.OA.C.6 |
| Subtract within 20 | 1.OA.C.6 |
| Equal sign | 1.OA.D.7 |
| Find missing number (add and subtract within 20) | 1.OA.D.8 |

**RIT Range: 179-191**

| | |
|---|---|
| Repeated addition | 2.OA.C.4 |

**RIT Range: 192-202**

| | |
|---|---|
| Commutative property of multiplication | 3.OA.B.5 |
| Distributive property of multiplication | 3.OA.B.5 |
| Relate division to multiplication | 3.OA.B.6 |
| Relate division to multiplication word problems | 3.OA.B.6 |
| Basic division | 3.OA.C.7 |
| Basic multiplication | 3.OA.C.7 |
| Divide by 1 | 3.OA.C.7 |
| Divide by 10 | 3.OA.C.7 |
| Divide by 2 | 3.OA.C.7 |
| Divide by 3 | 3.OA.C.7 |
| Divide by 4 | 3.OA.C.7 |
| Divide by 5 | 3.OA.C.7 |
| Divide by 6 | 3.OA.C.7 |
| Divide by 7 | 3.OA.C.7 |

# Operations and Algebraic Thinking

Properties of Operations                                        Standards Alignment

RIT Range:  192-202

| | |
|---|---|
| [Divide by 8](#) | 3.OA.C.7 |
| [Divide by 9](#) | 3.OA.C.7 |
| [Find missing divisors and dividends (1-digit division)](#) | 3.OA.C.7 |
| [Multiply by 0 or 1](#) | 3.OA.C.7 |
| [Multiply by 2](#) | 3.OA.C.7 |
| [Multiply by 3](#) | 3.OA.C.7 |
| [Multiply by 4](#) | 3.OA.C.7 |
| [Multiply by 5](#) | 3.OA.C.7 |
| [Multiply by 6](#) | 3.OA.C.7 |
| [Multiply by 7](#) | 3.OA.C.7 |
| [Multiply by 8](#) | 3.OA.C.7 |
| [Multiply by 9](#) | 3.OA.C.7 |
| [Relate repeated addition to multiplication](#) | 3.OA.C.7 |
| [Whole numbers on the number line](#) | 3.OA.C.7 |

# Number and Operations

Understand Place Value, Counting, and Cardinality                    Standards Alignment

RIT Range:  <160

| | |
|---|---|
| Count tens | K.CC.A.1 |
| Numbers to 100 | K.CC.A.1 |
| Missing numbers | K.CC.A.2 |
| Count in order | K.CC.B.4 |
| Count in pictures | K.CC.B.4 |
| Find 1 more or 1 less than a number | K.CC.B.4 |
| Count objects 1 | K.CC.B.5 |
| Count objects 2 | K.CC.B.5 |
| Count with small numbers | K.CC.B.5 |
| Compare numbers of objects 1 | K.CC.C.6 |
| Comparing numbers to 10 | K.CC.C.7 |
| Teen numbers | K.NBT.A.1 |

RIT Range:  161-178

| | |
|---|---|
| Numbers to 120 | 1.NBT.A.1 |
| 2-digit place value challenge | 1.NBT.B.2 |
| Groups of ten objects | 1.NBT.B.2 |
| Compare 2-digit numbers | 1.NBT.B.3 |
| Compare 2-digit numbers 2 | 1.NBT.B.3 |

RIT Range:  179-191

| | |
|---|---|
| Hundreds, tens, and ones | 2.NBT.A.1 |
| Count money (U.S.) | 2.NBT.A.2 |
| Skip-count by 10s | 2.NBT.A.2 |
| Skip-count by 5s | 2.NBT.A.2 |
| Skip-counting by 100s | 2.NBT.A.2 |
| 3-digit place value challenge | 2.NBT.A.3 |

# Number and Operations

Understand Place Value, Counting, and Cardinality                    Standards Alignment

RIT Range:  179-191

      Compare 3-digit numbers                                        2.NBT.A.4

# Number and Operations

Number and Operations: Base Ten and Fractions                    Standards Alignment

## RIT Range: 161-178

| | |
|---|---|
| Add 1s or 10s (no regrouping) | 1.NBT.C.4 |
| Add 2-digit numbers (no regrouping) | 1.NBT.C.4 |
| Break apart 2-digit addition problems | 1.NBT.C.4 |
| Regroup when adding 1-digit numbers | 1.NBT.C.4 |
| Add 1 or 10 | 1.NBT.C.4 \| 1.NBT.C.5 |

## RIT Range: 179-191

| | |
|---|---|
| Add 2-digit numbers by making tens | 2.NBT.B.5 |
| Add 2-digit numbers by making tens 2 | 2.NBT.B.5 |
| Add within 100 | 2.NBT.B.5 |
| Subtract 1 or 10 | 2.NBT.B.5 |
| Subtract 2-digit numbers (no regrouping) | 2.NBT.B.5 |
| Subtract within 100 | 2.NBT.B.5 |
| Subtract within 20 | 2.NBT.B.5 |
| Subtracting 1s or 10s (no regrouping) | 2.NBT.B.5 |
| Add 10s and 100s (no regrouping) | 2.NBT.B.7 |
| Add 2- and 3-digit numbers (no regrouping) | 2.NBT.B.7 |
| Add and subtract on a number line | 2.NBT.B.7 |
| Add and subtract using a number line | 2.NBT.B.7 |
| Select strategies for adding within 100 | 2.NBT.B.7 |
| Subtract 10s and 100s (no regrouping) | 2.NBT.B.7 |
| Subtract 2- and 3-digit numbers (no regrouping) | 2.NBT.B.7 |
| Add using groups of 10 and 100 | 2.NBT.B.7 \| 3.NBT.A.2 |
| Break apart 3-digit addition problems | 2.NBT.B.7 \| 3.NBT.A.2 |
| Estimate to add and subtract multi-digit whole numbers | 2.NBT.B.7 \| 3.NBT.A.2 |

# Number and Operations

Number and Operations: Base Ten and Fractions | Standards Alignment

RIT Range:  192-202

| | |
|---|---|
| Add using groups of 10 and 100 | 2.NBT.B.7 \| 3.NBT.A.2 |
| Break apart 3-digit addition problems | 2.NBT.B.7 \| 3.NBT.A.2 |
| Estimate to add and subtract multi-digit whole numbers | 2.NBT.B.7 \| 3.NBT.A.2 |
| Round to nearest 10 or 100 | 3.NBT.A.1 |
| Round to nearest 10 or 100 on the number line | 3.NBT.A.1 |
| Rounding challenge | 3.NBT.A.1 |
| Add within 1000 | 3.NBT.A.2 |
| Subtract within 1000 | 3.NBT.A.2 |
| Multiply by tens | 3.NBT.A.3 |
| Multiply by tens word problems | 3.NBT.A.3 |
| Cut shapes into equal parts | 3.NF.A.1 |
| Identify numerators and denominators | 3.NF.A.1 |
| Identify unit fractions | 3.NF.A.1 |
| Recognize fractions | 3.NF.A.1 |
| Recognize fractions greater than 1 | 3.NF.A.1 |
| Find 1 on the number line | 3.NF.A.2 |
| Fractions on the number line | 3.NF.A.2 |
| Unit fractions on the number line | 3.NF.A.2 |
| Relate fractions to 1 | 3.NF.A.2 \| 3.NF.A.3 |
| Compare fractions of different wholes | 3.NF.A.3 |
| Compare fractions with the same denominator | 3.NF.A.3 |
| Compare fractions with the same numerator | 3.NF.A.3 |
| Compare fractions with the same numerator or denominator | 3.NF.A.3 |
| Equivalent fraction models | 3.NF.A.3 |
| Equivalent fractions on the number line | 3.NF.A.3 |
| Visually compare fractions 1 | 3.NF.A.3 |

# Number and Operations

Number and Operations: Base Ten and Fractions                    Standards Alignment

RIT Range:  192-202

    [Write fractions as whole numbers](#)                    3.NF.A.3

# Measurement and Data

Solve Problems Involving Measurement                    Standards Alignment

RIT Range:  <160

    Compare size                                           K.MD.A.2

RIT Range:  161-178

    Indirect measurement                                  1.MD.A.1

    Order by length                                       1.MD.A.1

    Measure lengths 1                                     1.MD.A.2

    Tell time to hour or half hour                        1.MD.B.3

RIT Range:  179-191

    Measure lengths 2                                     2.MD.A.1

    Estimate lengths                                      2.MD.A.3

    Estimate lengths (US Customary units)                 2.MD.A.3

    Length word problems                                  2.MD.B.5

    Add and subtract on the number line word problems     2.MD.B.6

    Tell time with a labeled clock                        2.MD.C.7

    Tell time without labels                              2.MD.C.7

    Count money (U.S.)                                    2.MD.C.8

RIT Range:  192-202

    Tell time to the nearest minute                       3.MD.A.1

    Telling time on the number line                       3.MD.A.1

    Telling time word problems (within the hour)          3.MD.A.1

    Time differences (within the hour)                    3.MD.A.1

    Time word problems with number line                   3.MD.A.1

    Estimate mass (grams and kilograms)                   3.MD.A.2

    Estimate volume (milliliters and liters)              3.MD.A.2

    Word problems with mass                               3.MD.A.2

    Word problems with volume                             3.MD.A.2

## Measurement and Data

Solve Problems Involving Measurement                    Standards Alignment

RIT Range:  192-202

| | |
|---|---|
| [Understanding area](#) | 3.MD.C.5 |
| [Find area by counting unit squares](#) | 3.MD.C.5  \|  3.MD.C.6 |
| [Create rectangles with a given area](#) | 3.MD.C.6 |
| [Find area with partial unit squares](#) | 3.MD.C.6 |
| [Area and the distributive property](#) | 3.MD.C.7 |
| [Compare areas by multiplying](#) | 3.MD.C.7 |
| [Decompose figures to find area 1](#) | 3.MD.C.7 |
| [Decompose figures to find area 2](#) | 3.MD.C.7 |
| [Find a missing side length when given area](#) | 3.MD.C.7 |
| [Measure to find area](#) | 3.MD.C.7 |
| [Transition from unit squares to area formula](#) | 3.MD.C.7 |
| [Compare area and perimeter](#) | 3.MD.D.8 |
| [Find a missing side length when given perimeter](#) | 3.MD.D.8 |
| [Find perimeter by counting unit squares](#) | 3.MD.D.8 |
| [Find perimeter when given side lengths](#) | 3.MD.D.8 |
| [Measure to find perimeter](#) | 3.MD.D.8 |
| [Perimeter word problems](#) | 3.MD.D.8 |

# Measurement and Data

Represent and Interpret Data                              Standards Alignment

RIT Range:  <160

    Compare numbers of objects 2                      K.MD.B.3

RIT Range:  161-178

    Solve problems with bar graphs 1                  1.MD.C.4

RIT Range:  179-191

    Solve problems with bar graphs 2                  2.MD.D.10

    Solve problems with picture graphs 1              2.MD.D.10

    Make bar graphs 1                                 2.MD.D.9

    Make line plots                                   2.MD.D.9

    Make picture graphs 1                             2.MD.D.9

    Solve problems with line plots                    2.MD.D.9

RIT Range:  192-202

    Create bar graphs                                 3.MD.B.3

    Create picture graphs (picture more than 1)       3.MD.B.3

    Read bar graphs and solve 1-step problems         3.MD.B.3

    Read bar graphs and solve 2 step problems         3.MD.B.3

    Read picture graphs                               3.MD.B.3

    Read picture graphs (multi-step problems)         3.MD.B.3

    Graph data on line plots                          3.MD.B.4

    Read line plots (data with fractions)             3.MD.B.4

# Geometry

Reason with Shapes and Their Attributes                    Standards Alignment

### RIT Range:  <160

| | |
|---|---|
| Name shapes 1 | K.G.A.1 |
| Relative position | K.G.A.1 |
| Name shapes 2 | K.G.A.2 |
| Compare shapes | K.G.B.4 |
| Compose shapes | K.G.B.6 |

### RIT Range:  161-178

| | |
|---|---|
| Name shapes 3 | 1.G.A.1 |
| Halves and fourths | 1.G.A.3 |

### RIT Range:  179-191

| | |
|---|---|
| Name shapes 4 | 2.G.A.1 |
| Equal parts of circles and rectangles | 2.G.A.3 |

### RIT Range:  192-202

| | |
|---|---|
| Categorize quadrilaterals | 3.G.A.1 |
| Identify quadrilaterals | 3.G.A.1 |
| Cut shapes into equal parts | 3.G.A.2 |
| Identify unit fractions | 3.G.A.2 |