

# RIT

## Reference Chart for MPG Mathematics



MAP tests produce scores that make it possible to monitor student growth from year to year along developmental curriculum scales or continua. The chart inside shows examples of the kinds of work students can do at various points along the MAP RIT scale, assuming they have been exposed to content. This type of information is helpful in supporting appropriate instruction.

Please note that each subject area has a unique alignment to the RIT scale. As a result, scores between subjects are not equivalent.

### How to use the charts:

1. Find the column containing the student's score for a particular subject. For example, if the student's score in "Geometry" is 188, refer to the column labeled 181-190.
2. Read the column(s) from left to right to locate a sample test question for a given reporting area, such as "Geometry." A student's score suggests that, currently, he or she is likely to get about half of the questions of this difficulty correct.
3. Now look at the questions in the column(s) to the left, and higher on the page. The student is likely to get most of these correct, assuming he or she has been instructed in these skills and concepts.
4. The questions further down the page will probably require new learning on the student's part.

### Please note:

Test items in this booklet are sample items, and many are not calibrated or field-tested. For purposes of this document, RIT scale alignment is an approximation.

**Operations and Algebraic Thinking**

Students can represent and solve problems involving addition, subtraction, multiplication, and division. They understand and can apply properties of operations, and understand the relationship between operations.

below **131**



1 2 3 4 5

Look at the trucks.

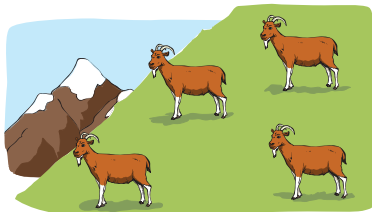
Two trucks and one more truck is how many trucks altogether?

**131-140**



Listen to the story problem:  
 There is 1 tree in the yard. 2 more get planted in the yard.  
 Move the trees to the yard to show how many there are altogether.

**141-150**



Listen to the story problem:

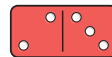
There are four goats on the hillside. Three goats leave the hillside.

Click on the goats to show how many are on the hillside now.

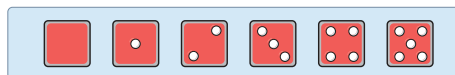
**151-160**



The domino shows one way to make 5.



Move dots to the empty domino to show a different way to make 5.



**161-170**



$4 + \underline{\quad} = 6$

Blank input box for the answer to the equation.

1 2 3 4 5 6 7 8 9

You can use the buttons to help you find the answer to the problem.

Move the correct number to the blank line to make the sentence true.

**171-180**



\_\_\_\_\_ shells

Blank input box for the number of shells left.

30 35 43 48  
 78 112 121

Bella had 78 shells in her collection. She gave 43 shells away to her friends.

How many shells are left in Bella's collection?

You can move base ten blocks to help you solve the problem.

**181-190**



The Lions had 47 points at halftime. At the end of the game they had 89.

How many points did the Lions score after halftime?

\_\_\_\_\_ points

1 2 3 4 5 6 7 8 9

above **191**



$$\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$$

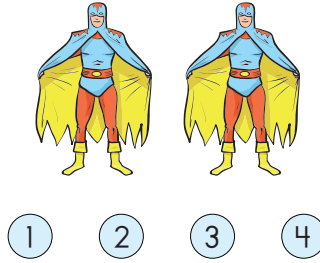
Blank line above a row of buttons: 1 2 3 4 5 6 7 8 9

What is the answer?

**Number and Operations**

Students can understand place value, the counting sequence, and counting strategies. They can compose and decompose numbers into hundreds, tens, and ones. Students can use place value understanding to compare numbers, perform multi-digit arithmetic, and develop understanding of fractions.

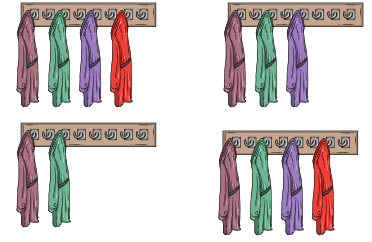
below **131**



Look at the picture.

How many superheroes are there?

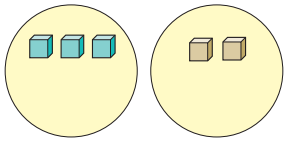
**131-140**



Look at the coat racks.

Click on the rack that has the fewest coats.

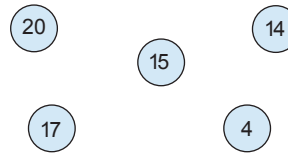
**141-150**



Look at the two groups.

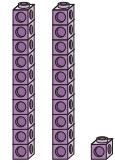
Move cubes to the circles to make the groups equal.

**151-160**



Click on the number that is 1 more than 13.

**161-170**



What number do the blocks show?

**171-180**



347

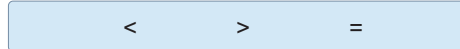
\_\_\_\_\_



Look at the number.

What is 100 more than 347?

**181-190**



Look at the numbers.

Put the correct symbol in each of these problems to make them true.

above **191**



6 hundreds and 5 ones

\_\_\_\_\_



Which number is described?

**Measurement and Data**

Students can solve problems involving measurement and estimation of lengths, time, liquid volumes, and masses of objects. They can use geometric measurement to understand area and perimeter. Students can organize, represent, and interpret data in various graphical representations.

below **131**



Look at the picture.

Click on the shortest student.

**131-140**



Look at the group of objects. The objects in this group belong together.



Click on the object that belongs with the group.

**141-150**

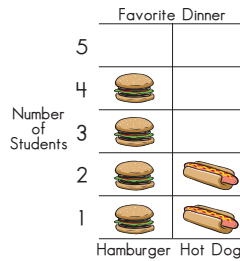


Gold Star Stickers	
Sarah	★★★★
Pablo	★
Jamal	★★★★★
Cher	★★
Maria	★★★★★

Look at the sticker chart.

Click on the name of the student with the most star stickers.

**151-160**



1 2 3 4 5 6

Look at the graph.

How many students chose hot dog as their favorite dinner?

**161-170**



\_\_\_\_\_ blocks

1 2 3 4 5 6 7 8 9

Look at the picture of the bus.

Measure the length of the bus using blocks. How many blocks long is the bus?

**171-180**

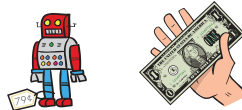


3:45 9:15 8:20 4:40

Look at the clock.

What time is shown on the clock?

**181-190**



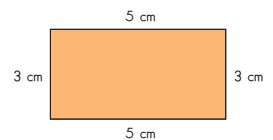
\_\_\_\_\_



Listen to the story: Julia bought a robot toy for 79 cents. She paid for it with one dollar.

Show the change that Julia should receive. Take as many coins as you need from each stack.

above **191**



10 11 12 13 14  
 15 16 17 18 19 20

What is the perimeter of the rectangle?

**Geometry**

Students can reason with shapes and their attributes. They can identify and describe shapes having specified attributes. Students can partition shapes into equal shares to gain an understanding of fractional parts of a whole.

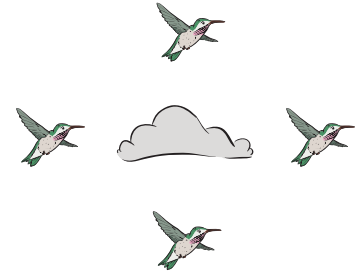
below **131**



Look at the shapes.

Which shape has only 3 sides?

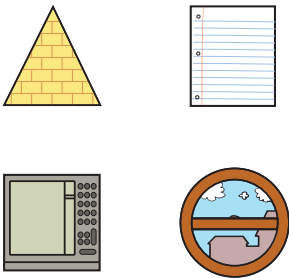
**131-140**



Look at the picture.

Which bird is over the cloud?

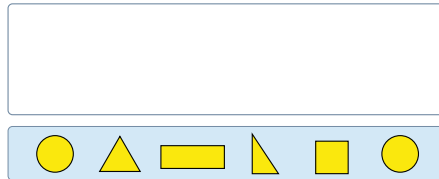
**141-150**



Look at the pictures.

Which is shaped like a circle?

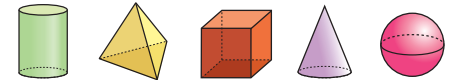
**151-160**



Look at the shapes.

Move ALL the shapes with four corners to the mat.

**161-170**



Look at the shapes.

Click on the pyramid.

**171-180**



Look at the shapes.

Click on ALL of the shapes that are divided into equal shares.

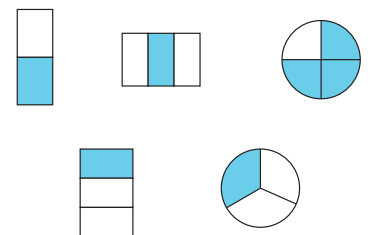
**181-190**



Look at the shapes.

Click on the shapes that have six faces.

above **191**



Look at the shapes.

Click on ALL of the shapes with one-third shaded.