

Discover Subtraction (-1) with Météormath!

Grade level:

Elementary school – Cycle 1

Subject:

Mathematics

Learning progression (p. 11):

- Operations involving numbers
- Builds a repertoire of memorized addition and subtraction facts
- Builds a memory of subtraction facts, using objects, drawings, charts, or tables

Strategy taught:

If you take away 1 from any quantity, the answer will be the number immediately before it.

Activity duration:

60 minutes

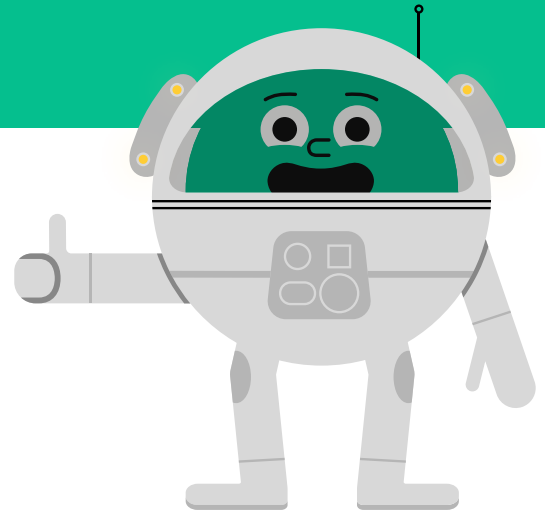
Materials:

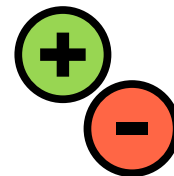
- Copies of activity 1, “Subtraction”
- Copies of activity 2, “Removing from a Quantity”
- Internet-connected computers to play Météormath

Objective

This learning activity will help students develop a memorized repertoire of subtraction facts by uncovering a strategy for memorizing subtractions that include the number 1.

They will learn that when the number 1 is included in a subtraction, the answer will automatically be the number before the first quantity in the math sentence.





Step 1: Activity 1 – “Subtraction”

Activity overview (5 minutes)

Pass out the activity sheet titled “Subtraction” to every student in your class. Read the instructions and go over the first math sentence as an example. Make sure your students understand what to draw and what colours to use. Emphasize the importance of working neatly in each box of 10 circles, which will make it easier to count everything up later.

Group work (10 minutes)

Have students complete the activity in teams of two or three while you walk around the classroom to help anyone who is struggling.

Correction and feedback (5 minutes)

Project the activity on your board and go over the answer to each math sentence with your students. Ask your students to share what they noticed about the activity and lead them to the conclusion that the number 1 is in each math sentence, because today’s goal is to discover an effective strategy for memorizing subtractions that include the number 1. Also take this time to remind your class that, unlike addition, subtraction is not commutative, meaning that if you reverse the order of the numbers in a math sentence, you will get a different answer.

Step 2: Activity 2 – “Removing from a Quantity”

Activity overview (5 minutes)

Pass out the activity sheet. Read the instructions with your students. Be sure to point out that the math sentences are the same as the ones they just worked on. Have your students get out pencils in all three required colours, then go over the example question. Explain that it is important to use the right colours so students can find the subtraction strategy. You can also take this opportunity to introduce math vocabulary by explaining that the answer to a subtraction problem is called the difference.

Group work (10 minutes)

Have students complete the activity in teams of two or three while you walk around the classroom to help anyone who is struggling.

Correction and explanation of the -1 strategy (5 minutes)

Point out to students that the answer is always directly before the first number in the math sentence. So, when you subtract 1 from a quantity, the answer will always be the number directly before the first number in the math sentence. Do the last two problems with your students. Do a few other examples with them on the board to help them understand the strategy.

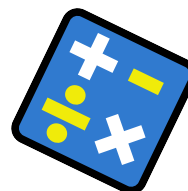
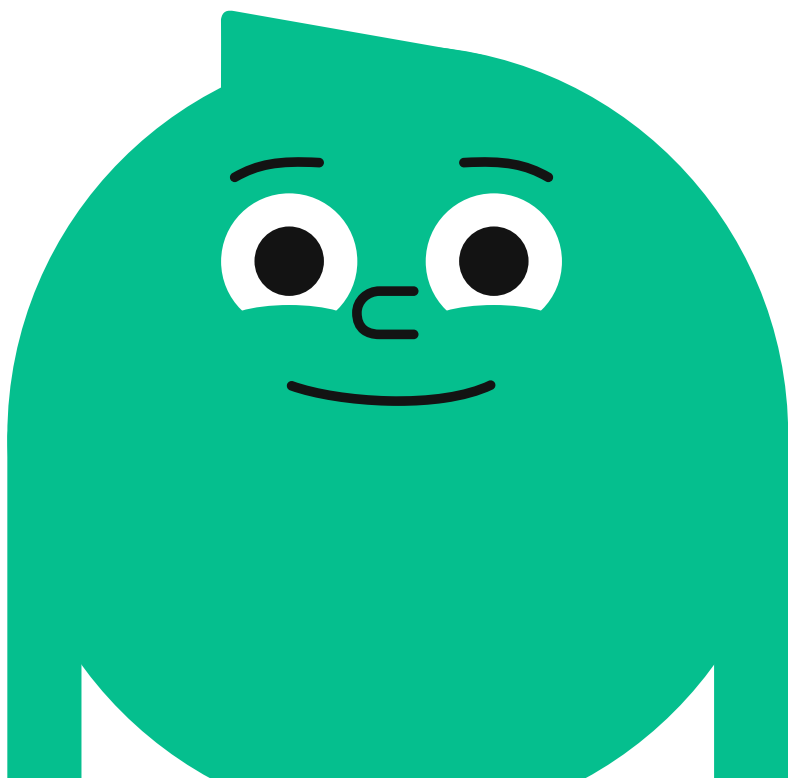
Step 3: Météormath

Game overview (5 minutes)

Explain that your students will be playing Météormath to practise the strategy they have learned. Project the game on your board and demonstrate how to play it. On the settings page, be sure to choose the “subtraction” and “1s table” options and set the difficulty level to “beginner.”

Météormath play period (15 minutes)

Have students play Météormath in small groups to practise the new strategy. Make sure they use the settings listed above and have a memory aid with the numbers 0 to 20 nearby.



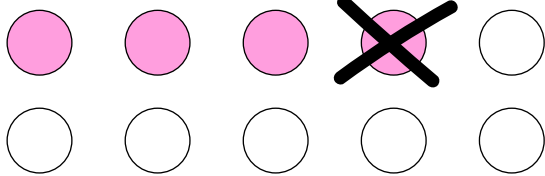
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Subtractions

Using drawings, find the answer to each subtraction.

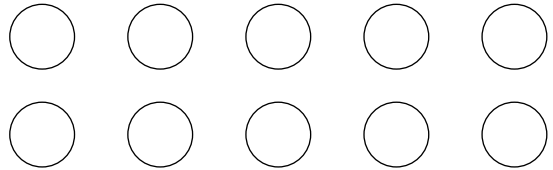


Example: $4 - 1 = 3$



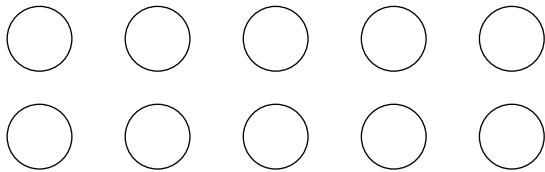
5.

$8 - 1 =$



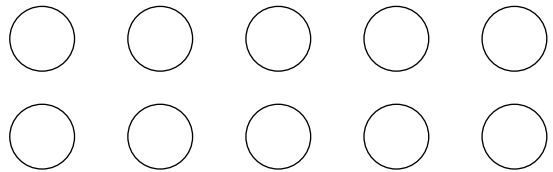
1.

$9 - 1 =$



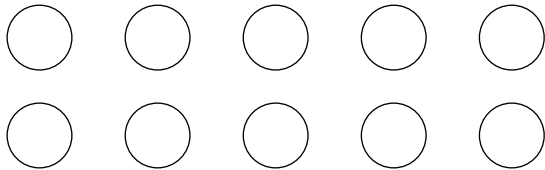
6.

$5 - 1 =$



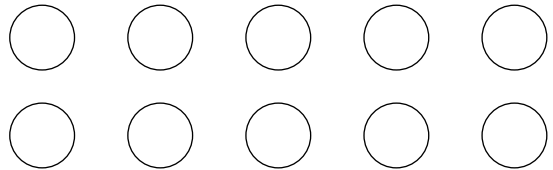
2.

$7 - 1 =$



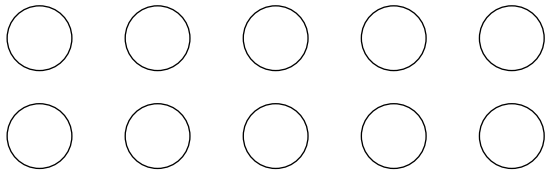
7.

$6 - 1 =$



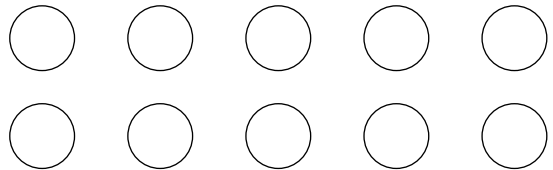
3.

$3 - 1 =$



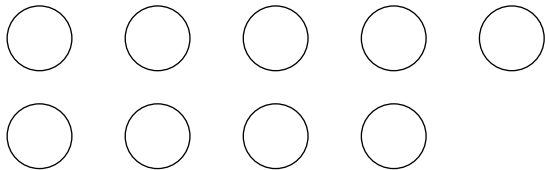
8.

$2 - 1 =$



4.

$1 - 1 =$



Removing from a Quantity



Using what you learned in the previous activity, circle the terms in each of the math sentences. Follow the legend!



Pink = 1

Blue = the other term in the math sentence

Red = the difference

Example: $4 - 1 = 3$

0 1 2 3 4 5 6 7 8 9 10

1. $9 - 1 = 8$

0 1 2 3 4 5 6 7 8 9 10

2. $7 - 1 = 6$

0 1 2 3 4 5 6 7 8 9 10

3. $3 - 1 = 2$

0 1 2 3 4 5 6 7 8 9 10

4. $1 - 1 = 0$

0 1 2 3 4 5 6 7 8 9 10



5. $8 - 1 = 7$

0 1 2 3 4 5 6 7 8 9 10

6. $5 - 1 = 4$

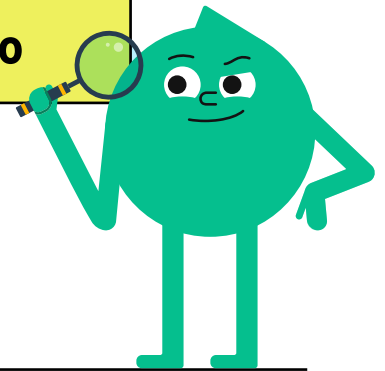
0 1 2 3 4 5 6 7 8 9 10

7. $6 - 1 = 5$

0 1 2 3 4 5 6 7 8 9 10

8. $2 - 1 = 1$

0 1 2 3 4 5 6 7 8 9 10



Do you notice anything?

What strategy did you use or learn during this activity?
