

Kindergarten Module 6

Subtraction, Geometry, and the Ellipsis

Check-Up

Introduction

- All bracketed text should not be read aloud and is for reference only.
- The questions have been numbered in this document to aid teachers and parents. However, the questions are not numbered the same way, if numbered at all, in the student documents.
- It is highly recommended that this check-up be completed across two or more sessions.

Part 1

Part 1 Materials

- Student Braille Document: GK-M6-Check-Up-Student.brf
- Five frame (Alternative: Tactile Five and Ten Frames from American Printing House for the Blind [APH])
- Counting bears placed in a bowl (Alternatives: different objects, Unifix cubes, base ten unit blocks)
- Pennies (Alternatives: APH Tactile Tokens, magnetic counters)
- Work tray (Alternative: cookie sheet)
- Optional: nonslip surface such as a rubber shelf liner or magnetic board to place the five frame on
- GK-M6-Check-Up-Data-Table.docx

Part 1 Teacher Note

The five frame is available in braille within the curriculum. The Tactile Tokens from APH fit perfectly into the five frame and the token can be flipped to the second texture to represent what is being taken away. You can also use the shapes and line segments from the Picture Maker Wheatley Tactile Diagramming Kit to create the five frame.

Part 1 Teacher Script

Use your counting bears with the first two problems.

Question 1.1

Susan had 4 pieces of gum. She gave 2 pieces of gum to a friend. How many pieces of gum does Susan have now?

Question 1.2

Connor loves chicken nuggets. His mother gave him 4 chicken nuggets, and he ate 3 of the nuggets. How many chicken nuggets does Connor have now?

Place the counting bears back in the bowl. You will need your five frame, pennies, and work tray for the next two problems.

Question 1.3

There are 3 ducks swimming in the pond. One duck swam away. How many ducks are swimming in the pond now?

Question 1.4

Five birds were sitting on a tree branch. Four flew away. How many birds are left on the tree?

Question 1.5

Let's move to the braille document now. There is just one symbol on the third line of braille. It is on the left side of the page.

[dots 4-5-6, dots 1-4-6]

⠠⠠

You should remember from the module that this is called an opening Nemeth Code indicator. It tells us that we are going to read math or science. Dots 4-5-6 are in the first cell, and dots 1-4-6 are in the second cell.

Find the plus sign in the fourth line of braille.

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Question 1.6

Find the minus sign in the fifth line of braille.

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Question 1.7

Find the equals sign in the sixth line of braille.

Question 1.8

Find the general omission symbol in the seventh line of braille.

The figure shows a sequence of 10 diagrams, each representing a pattern of black dots on a grid. The patterns evolve from a small 3x2 block to a large 10x10 grid. The evolution is as follows:

- Diagram 1: A 3x2 block of dots.
- Diagram 2: A 2x5 block of dots.
- Diagram 3: A 3x3 block of dots.
- Diagram 4: A 4x4 block of dots.
- Diagram 5: A 5x5 block of dots.
- Diagram 6: A 6x6 block of dots.
- Diagram 7: A 7x7 block of dots.
- Diagram 8: A 8x8 block of dots.
- Diagram 9: A 9x9 block of dots.
- Diagram 10: A 10x10 block of dots.

Question 1.9

Find the mathematical commas in the eighth line of braille. There will be more than one mathematical comma.

Question 1.10

Find the ellipsis in the last line of braille.

Question 1.11

Now turn to page 2 and read the numbered problems.

Question 1.12

Move your hands down to the next line of braille and let's try some more!

[Make sure the student is viewing the last five lines of braille on page 2.]

Part 2

Part 2 Materials

- Braillewriter
- Braille paper
- GK-M6-Check-Up-Data-Table.docx

Part 2 Teacher Script

Listen and then braille what you hear. Don't forget to number your problems. Let me know if you need for me to repeat what you should braille.

Question 2.1

1. minus sign

Question 2.2

2. equals sign

Question 2.3

3. general omission symbol

Question 2.4

4. plus sign

Question 2.5

5. ellipsis

Question 2.6

6. 3, 4, 5

Question 2.7

7. 16, 17, ...

Question 2.8

8. 5, 6, 7, ...

Question 2.9

9. 13, 14, 15, ...

Listen carefully and then braille what you hear. This time you will not number the problems. Let me know if you need for me to repeat what you should braille. I will repeat each equation as many times as you need.

Question 2.10

$2-0 = ?$

Question 2.11

$4-2 = ?$

Question 2.12

$5-3 = ?$

Question 2.13

$2-1 = ?$

Question 2.14

$3-0 = ?$

Let's try a few more. Listen carefully as some will be subtraction problems and some will be addition problems.

Question 2.15

$2-2 = ?$

Question 2.16

$$3-2 = ?$$

Question 2.17

$0+5 = ?$

Question 2.18

$3+1 = ?$

Question 2.19

$$1-1 = ?$$

Part 3

Part 3 Materials

- Student Braille Document: GK-M6-Check-Up-Student.brf
- Braillewriter
- Braille paper
- GK-M6-Check-Up-Data-Table.docx

Part 3 Teacher Script

Question 3.1

Let's return to your braille document. Read the equations at the top of page 3 and then tell me what number the general omission symbol stands for each time.

Question 3.2

Move your hands down to the next line of braille and continue reading the equations and telling me what number the general omission symbol stands for each time.

1234567890 1234567890 1234567890 1234567890 1234567890
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Question 3.3

Let's try some more on page 4. Read carefully as some will be subtraction problems and some will be addition problems.

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Question 3.4

Turn to page 5. Then locate the ellipsis in each line of braille and write the first three missing numbers in the list of missing numbers ranging from 0-20. Remember to number your problems.

1. 4, 5, ...

1234567890 1234567890 1234567890 1234567890

- Work tray (Alternative: cookie sheet)
- Optional: nonslip surface such as a rubber shelf liner or magnetic board to place the ten frame on
- Braillewriter
- Braille paper
- GK-M6-Check-Up-Data-Table.docx

Part 4 Teacher Notes

- The orientation of the shapes in the first question should vary.
- If the student calls a square a rectangle, tell them that they are correct, but it is a special kind of rectangle. What is its special name?
- The ten frame is available in both uncontracted and contracted braille within the curriculum. The Tactile Tokens from APH fit perfectly into the ten frame and the tokens can be flipped so that the second texture can represent what is subtracted.
- Encourage the student to verbalize the process they use to solve each problem.

Part 4 Teacher Script

Question 4.1

I have placed 12 shapes into a work tray. Pick up one shape at a time and tell me if it is a square, rectangle, triangle, or circle.

Tell me about each shape.

Question 4.2

circle

Question 4.3

triangle

Question 4.4

rectangle

Question 4.5

square

Now, use the ten frame with pennies on the work tray to solve some problems. If you want to challenge yourself, write the equation and answer using your braillewriter and braille paper! Don't forget to number the problems! I know you can do it!

Question 4.6

Demetri found 9 seashells on the beach. He shared 3 of the shells with his sister. How many seashells does he have now?

Question 4.7

There are 10 apples in the fruit bowl. Papa ate 4 of the apples. How many apples are left in the fruit bowl?

Question 4.8

LaTrice collects rocks and fossils. She has 16 rocks and 7 fossils. She gave her best friend one of the fossils as a birthday gift. How many fossils does she have now?

Question 4.9

Six friends sat on a bench and ate ice cream. Two of the friends finished their ice cream and went to play on the rock climbing wall. How many friends are now sitting on the bench?

Question 4.10

The library has 8 books about trains in the children's section. Robert loves to read books, especially books about trains. He checked out 5 of the books about trains. How many books about trains are left at the library?