

First Grade Module 4

Subtraction to 20 and

Equal Shares of Circles and Rectangles

Check-Up

Introduction

- This check-up should be completed with hard copy braille and a braillewriter instead of a refreshable braille display.
- 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.
- If desired, the student can use the ten frame included in the curriculum, pennies, and a work tray when completing the subtraction portions of the check-up. It may help to place the ten frame on a nonslip surface such as a rubber shelf liner.

Part 1

Part 1 Materials

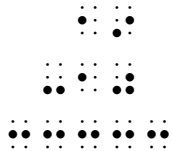
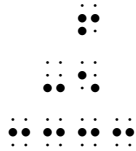
- Student Braille Document: G1-M4-Check-Up-Student.brf
- G1-M4-Check-Up-Data-Table.docx

Part 1 Teacher Script

Question 1.1

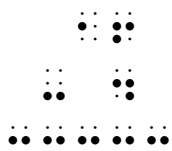
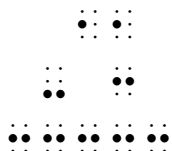
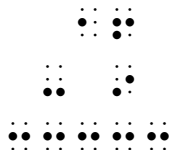
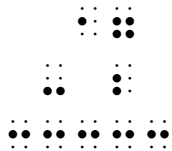
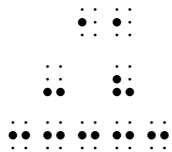
Read the vertically aligned problems involving subtraction within 20 on page 1 in your braille document.

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• •
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Question 1.2

Turn to page 2 and continue to read the problems.



Question 1.3

Turn to page 3 and continue to read the problems.

$$\begin{array}{r} 1 \\ 2 \\ 3 \end{array}$$

$$\begin{array}{r} 1 \\ 2 \\ 3 \end{array}$$

$$\begin{array}{r} 1 \\ 2 \\ 3 \end{array}$$

$$\begin{array}{r} 1 \\ 2 \\ 3 \end{array}$$

Read the numbered problems involving subtraction within 20 on page 4 of your braille document.

Question 1.4

[Make sure the student is viewing the first row of problems on page 4.]

$$\begin{array}{r} 1 \\ 2 \\ 3 \end{array}$$

Question 1.5

[Make sure the student is viewing the second row of problems on page 4.]

$$\begin{array}{r} 123456789 \\ 123456789 \\ 123456789 \\ 123456789 \\ 123456789 \end{array}$$

Question 1.6

[Make sure the student is viewing the third row of problems on page 4.]

$$\begin{array}{r} 123456789 \\ 123456789 \\ 123456789 \\ 123456789 \\ 123456789 \end{array}$$

Question 1.7

[Make sure the student is viewing the fourth row of problems on page 4.]

$$\begin{array}{r} 123456789 \\ 123456789 \\ 123456789 \\ 123456789 \\ 123456789 \end{array}$$

Question 1.8

[Make sure the student is viewing the last row of problems on page 4.]

$$\begin{array}{r} 123456789 \\ 123456789 \\ 123456789 \\ 123456789 \\ 123456789 \end{array}$$

Part 2

Part 2 Materials

- Student Braille Document: G1-M4-Check-Up-Student.brf
- G1-M4-Check-Up-Data-Table.docx

Part 2 Teacher Script

Question 2.1

Now read each problem involving subtraction on page 5, use the count back strategy, and then tell me the answer.

$$\begin{array}{r} 12 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ - 8 \\ \hline \end{array}$$

Question 2.2

Turn to page 6 and continue to read each problem. Also tell me the answer before moving to the next problem.

$$\begin{array}{r} 12 \\ - 8 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ 34 \\ 56789 \end{array}$$

$$\begin{array}{r} 12 \\ 34 \\ 56789 \end{array}$$

$$\begin{array}{r} 12 \\ 34 \\ 56789 \end{array}$$

Question 2.3

Now read each subtraction problem on page 7 and then tell me the answer. Use what you know about related doubles addition facts to help you.

$$\begin{array}{r} 12 \\ 34 \\ 56789 \end{array}$$

$$\begin{array}{r} 12 \\ 34 \\ 56789 \end{array}$$

$$\begin{array}{r} 12 \\ 34 \\ 56789 \end{array}$$

$$\begin{array}{r} 12 \\ 34 \\ 56789 \end{array}$$

$$\begin{array}{r} 10 \\ 10 \\ 100 \\ \hline 120 \end{array}$$

Question 2.4

Turn to page 8 and continue to read each problem. Then tell me the answer.

$$\begin{array}{r} 10 \\ 10 \\ 100 \\ \hline 120 \end{array}$$

$$\begin{array}{r} 10 \\ 10 \\ 100 \\ \hline 120 \end{array}$$

$$\begin{array}{r} 10 \\ 10 \\ 100 \\ \hline 120 \end{array}$$

$$\begin{array}{r} 10 \\ 10 \\ 100 \\ \hline 120 \end{array}$$

$$\begin{array}{r} 10 \\ 10 \\ 100 \\ \hline 120 \end{array}$$

Now read each numbered problem involving subtraction within 20 on page 9 of your braille document. Then use the "think addition" strategy and tell me the answer.

Question 2.5

[Make sure the student is viewing the first row of problems on page 9.]

$1234 + 5678 = 6912$
 $1234 + 5678 = 6912$

Question 2.6

[Make sure the student is viewing the second row of problems on page 9.]

$1234 + 5678 = 6912$
 $1234 + 5678 = 6912$

Question 2.7

[Make sure the student is viewing the third row of problems on page 9.]

$1234 + 5678 = 6912$
 $1234 + 5678 = 6912$

Question 2.8

[Make sure the student is viewing the last row of problems on page 9.]

$1234 + 5678 = 6912$
 $1234 + 5678 = 6912$

Question 2.9

[Make sure the student is viewing the first row of problems on page 10.]

$1234 + 5678 = 6912$
 $1234 + 5678 = 6912$

Part 3

Part 3 Materials

- Work tray
- 9 different sized, 2-dimensional shapes (3 circles, 3 rectangles, and 3 half-circles) which can be found in the following kits from the American Printing House for the Blind:
 - MathBuilders, Unit 7: Fractions, Mixed Numbers, and Decimals Kit
 - MathBuilders, Unit 6: Geometry Kit
 - Puzzle Form Board Kit
 - Focus in Math Kit
 - Feel 'n Peel Sheets: Carousel of Textures has a variety of non-adhesive backed textured paper that can be used to create shapes
- inTACT Sketchpad or a DRAFTSMAN: Tactile Drawing Board
- Tactile drawing film
- G1-M4-Check-Up-Data-Table.docx
- Optional: Wikki Stix®, graphic art tape, braille paper

Part 3 Teacher Notes

- If students seem to struggle in providing a description, you can offer a helping hint or a 2-dimensional shape.
- For questions 5-8, begin by drawing the following shapes in random order from left to right on either the Sketchpad or Draftsman: 1) circle; 2) half-circle; and 3) rectangle.
- Before moving to question 6, draw a vertical line and divide the rectangle into two equal parts.
- Before moving to question 7, use a new sheet of tactile drawing film and draw six circles of different sizes. Then divide two of the circles into two equal parts; two of the circles into two unequal parts; one of the circles into four equal parts; and one of the circles into four unequal parts.
- Before moving to question 9, use a new sheet of tactile drawing film and draw six rectangles of different sizes and orientation. Then divide two of the rectangles into two equal parts; one of the rectangles into two unequal parts; two of the rectangles into four equal parts; and one of the rectangles into four unequal parts.
- You may use Wikki Stix® or graphic art tape on braille paper to create any of the shapes.

Part 3 Teacher Script

Question 3.1

I have placed 9 shapes into a work tray. Pick up one shape at a time and tell me if it is a rectangle, half-circle, or circle.

Now place the shapes back in the work tray and then tell me about each shape, as I give you the name.

Question 3.2

circle

Question 3.3

rectangle

Question 3.4

half-circle

Question 3.5

I have used the inTACT Sketchpad (or the DRAFTSMAN: Tactile Drawing Board) to draw several shapes. Use both hands and scan the drawing film from left to right. Then tell me the name of each shape, moving from left to right!

Question 3.6

I have drawn a line and divided the rectangle into two parts. Are the parts equal or unequal? How do you know?

Question 3.7

I have drawn six circles. Use both hands and scan the drawing film from left to right. Then tell me which circles have been divided into two equal parts.

Question 3.8

Now use your hands again and find the circle that has been divided into four equal parts.

Question 3.9

I have drawn six rectangles. Use both hands and scan the drawing film from left to right. Then tell me which rectangles have been divided into two equal parts.

Question 3.10

Now use your hands again and find the rectangles that have been divided into four equal parts.

Now place a new sheet of tactile drawing film in the Sketchpad (or the DRAFTSMAN) and draw each shape as I give you the name.

Question 3.11

circle

Question 3.12

rectangle

Question 3.13

half-circle

Question 3.14

Now locate the rectangle you have drawn. Then use a ruler and divide the rectangle into two equal parts.

Question 3.15

Now locate the circle you have drawn. Then use a ruler and divide the circle into four equal parts.

Part 4

Part 4 Materials

- Student Braille Document: G1-M4-Check-Up-Student.brf
- Braillewriter
- Braille paper
- G1-M4-Check-Up-Data-Table.docx

Part 4 Teacher Script

Question 4.1

Use your braillewriter to answer the problems on pages 5-10 in the student document. Begin by placing each page in your braillewriter. Finish by taking each page out of the braillewriter.

Listen and then braille what you hear on another piece of braille paper. You may need 2 pieces of paper.

Remember that all of the problems will be vertically aligned. You will need to press the line spacing key twice after writing each problem. Let me know if you need for me to repeat what you should braille.

Question 4.2

Write the following spatial problems: 8 minus 4 equals, 19 minus 3 equals, 10 minus 8 equals, 17 minus 17 equals, 15 minus 1 equals, 9 minus 6 equals, 20 minus 4 equals, and 13 minus 1 equals.

$$\begin{array}{r} 8 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \\ -3 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ -8 \\ \hline \end{array}$$

$$\begin{array}{r} 17 \\ -17 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ -1 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ -6 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r} 13 \\ -1 \\ \hline \end{array}$$

Let's try some more. This time the problems will be numbered. Remember to press the line spacing key twice after each problem.

Question 4.3

Write the following spatial problems: number 1: 7 minus 7 equals, number 2: 16 minus 3 equals, number 3: 11 minus 5 equals, number 4: 14 minus 8 equals, number 5: 18 minus 2 equals, and number 6: 20 minus 10 equals.

1.
$$\begin{array}{r} 7 \\ -7 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 16 \\ -3 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 11 \\ -5 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 14 \\ -8 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 18 \\ -2 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 20 \\ -10 \\ \hline \end{array}$$

Part 5

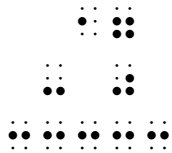
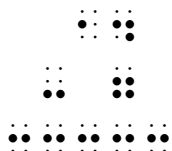
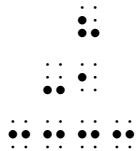
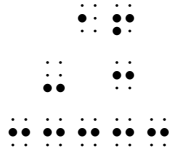
Part 5 Materials

- Student Braille Document: G1-M4-Check-Up-Student.brf
- G1-M4-Check-Up-Data-Table.docx

Part 5 Teacher Script

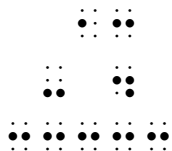
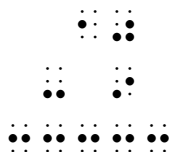
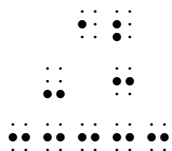
Question 5.1

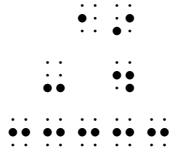
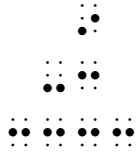
Now read each problem involving subtraction on page 11 in the student document. After each problem, use a strategy if needed, and tell me the answer.



Question 5.2

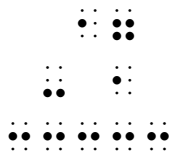
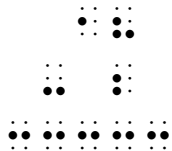
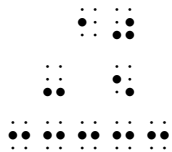
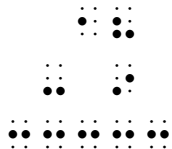
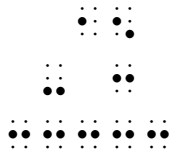
Turn to page 12 and continue to read each problem. Then tell me the answer.





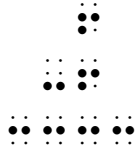
Question 5.3

Turn to page 13 and continue to read each problem. Then tell me the answer.

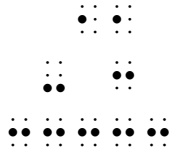


Question 5.4

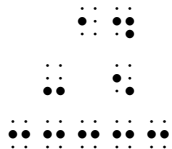
Turn to page 14 and continue to read each problem. Then tell me the answer.



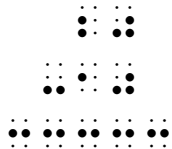
 The image shows the Nemeth Braille code for the number 14. It consists of three rows: the first row has one cell (dots 4-5), the second row has two cells (dots 4-5 and dots 2-5), and the third row has four cells (dots 4-5, dots 2-5, dots 2-4, and dots 2-3-4-5).



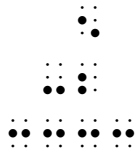
 The image shows the Nemeth Braille code for the number 15. It consists of three rows: the first row has two cells (dots 4-5 and dots 2-5), the second row has two cells (dots 2-5 and dots 2-4), and the third row has six cells (dots 4-5, dots 2-5, dots 2-4, dots 2-3-4-5, dots 2-3-4, and dots 2-3-5).



 The image shows the Nemeth Braille code for the number 16. It consists of three rows: the first row has two cells (dots 4-5 and dots 2-5), the second row has two cells (dots 2-5 and dots 2-4), and the third row has six cells (dots 4-5, dots 2-5, dots 2-4, dots 2-3-4-5, dots 2-3-4, and dots 2-3-5).



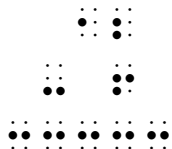
 The image shows the Nemeth Braille code for the number 17. It consists of three rows: the first row has two cells (dots 4-5 and dots 2-5), the second row has two cells (dots 2-5 and dots 2-4), and the third row has six cells (dots 4-5, dots 2-5, dots 2-4, dots 2-3-4-5, dots 2-3-4, and dots 2-3-5).



 The image shows the Nemeth Braille code for the number 18. It consists of three rows: the first row has one cell (dots 4-5), the second row has two cells (dots 4-5 and dots 2-5), and the third row has four cells (dots 4-5, dots 2-5, dots 2-4, and dots 2-3-4-5).

Question 5.5

Turn to page 15 and read the last problem.



 The image shows the Nemeth Braille code for the number 19. It consists of three rows: the first row has two cells (dots 4-5 and dots 2-5), the second row has two cells (dots 2-5 and dots 2-4), and the third row has six cells (dots 4-5, dots 2-5, dots 2-4, dots 2-3-4-5, dots 2-3-4, and dots 2-3-5).