

First Grade Module 1

Addition and Subtraction to 10, English Letter Indicator for Multiple Choice, and Long Dash Check-Up Answer Key

Introduction

- All bracketed text should not be read aloud and is for reference only.
- The questions and answers 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

- Five and ten frames (Alternative: APH Tactile Five and Ten Frames)
- Pennies (Alternatives: APH Tactile Tokens, magnetic counters)
- Work tray (Alternatives: cookie sheet)
- Optional: nonslip surface such as a rubber shelf liner or magnetic board to place the ten frame on
- Student Braille Document: G1-M1-Check-Up-Student.brf
- G1-M1-Check-Up-Data-Table.docx

Part 1 Teacher Notes

- The five and ten frames are available in braille within the curriculum. The Tactile Tokens from APH fit perfectly into the five and ten frames and the two textures can represent the two addends. You can also use the shapes and line segments from the Picture Maker Wheatley Tactile Diagramming Kit to create the five and ten frame.
- It may be helpful to assist the student in reading the title of the document, the subheading (Part 1), and the opening Nemeth indicator before moving to question 6 which is on the student braille document.

Part 1 Teacher Script

You will need your five frame, pennies, and work tray for the first four problems.

Question 1.1

Begin by placing 4 pennies on the five frame. How many more pennies are needed to make 5?

Answer 1.1

1

Question 1.2

Remove the pennies from the five frame and place them back in the work tray. Now place 2 pennies on the five frame. How many more pennies are needed to make 5?

Answer 1.2

3

Question 1.3

Remove the pennies from the five frame and place them back in the work tray. Now place 5 pennies on the five frame. How many more pennies are needed to make 5?

Answer 1.3

0

Question 1.4

Use your five frame and show me 3 different ways to make 5.

Answer 1.4

There are several possible correct responses, including $0+5$; $1+4$; $2+3$; $3+2$; $4+1$; and $5+0$.

For the next problem, you will need your ten frame, pennies, and work tray.

Question 1.5

Use your ten frame and show me 4 different ways to make 10.

Answer 1.5

There are several possible correct responses, including 0+10; 1+9; 2+8; 3+7; 4+6; 5+5; 6+4; 7+3; 8+2; 9+1; and 10+0.

Question 1.6

Find the long dash in the fifth line of braille on page 1.

⠠⠠⠠⠠⠠⠠⠠⠠

Answer 1.6

⠠⠠⠠⠠⠠⠠

The student should locate the long dash in the middle of the line.

Question 1.7

Find the long dash in the equation on the sixth line of braille on page 1.

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Answer 1.7

⠠⠠⠠⠠⠠⠠ (at the end of the equation)

Question 1.8

Now read the following numbered problems in braille.

[Make sure the student is viewing the set of problems on the second half of page 1.]

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

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Answer 1.8

Number 1: 8 equals 8

Number 2: 4 plus 1 equals 5

Number 3: 3 equals 1 plus 2

Number 4: 9 plus 1 equals 10

Number 5: 5 plus 3 equals what number

Question 1.9

Turn to page 2 and let's try some more!

Answer 1.9

Number 6: 3 plus 3 equals 6

Number 7: 4 plus 5 equals blank

Number 8: 7 plus blank equals 9

Number 9: blank plus 0 equals 0

Number 10: 8 plus 2 equals blank

Number 11: 1 plus blank equals 2

Number 12: blank plus 6 equals 10

Question 1.10

Now read the equations at the top of page 3 and then tell me what number the long dash stands for each time.

Answer 1.10

Number 1: 4 plus 1 equals blank.
The long dash stands for 5.

Number 2: 3 plus 2 equals blank.
The long dash stands for 5.

Number 3: 8 plus 2 equals blank.
The long dash stands for 10.

Number 4: 7 plus 0 equals blank.
The long dash stands for 7.

Number 5: 5 plus 5 equals blank.
The long dash stands for 10.

Question 1.11

Let's try some more! Once again read the equations and tell me what number the long dash stands for each time.

[Make sure the student is viewing problems 6-10 on page 3.]

Answer 1.11

Number 6: 7 plus blank equals 10.
The long dash stands for 3.

Number 7: 2 plus blank equals 5.
The long dash stands for 3.

Number 8: blank plus 6 equals 9.
The long dash stands for 3.

Number 9: blank plus 2 equals 8.
The long dash stands for 6.

Number 10: blank plus 6 equals 7.
The long dash stands for 1.

Part 2

Part 2 Materials

- Braillewriter
- Braille paper
- G1-M1-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. equals sign
2. plus sign
3. general omission symbol
4. long dash

5. minus sign

Answer 2.1

1. equals sign which is dots 4-6, dots 1-3

⠠⠨⠠⠨⠠⠨⠠⠨

2. plus sign which is dots 3-4-6

⠠⠨⠠⠨⠠⠨

3. general omission symbol which is dots 1-2-3-4-5-6

⠠⠨⠠⠨⠠⠨

4. long dash which is 4 cells of dots 3-6

⠠⠨⠠⠨⠠⠨⠠⠨

5. minus sign which is dots 3-6

⠠⠨⠠⠨⠠⠨

Question 2.2

Write the following problems: number 6: 2 plus 2 equals 4 and number 7: 3 plus 2 equals 5.

6. $2+2 = 4$

7. $3+2 = 5$

Answer 2.2

6. 2 plus 2 equals 4

⠠⠨⠠⠨⠠⠨⠠⠨⠠⠨⠠⠨

7. 3 plus 2 equals 5

⠠⠨⠠⠨⠠⠨⠠⠨⠠⠨⠠⠨

Question 2.3

Write the following problems: number 8: 1 plus 4 equals blank, number 9: 0 plus 3 equals blank, and number 10: 4 plus blank equals 5.

8. $1+4 = \underline{\hspace{2cm}}$

9. $0+3 = \underline{\hspace{2cm}}$

$$10. 4 + \underline{\hspace{2cm}} = 5$$

Answer 2.3

8. 1 plus 4 equals blank

9. 0 plus 3 equals blank

10. 4 plus blank equals 5

Question 2.4

Write the following problems: number 11: blank plus 1 equals 3, number 12: 4 plus 5 equals blank, number 13: 3 plus blank equals 6, number 14: blank plus 7 equals 9, and number 15: 2 plus blank equals 8.

11. _____ + 1 = 3

12. $4+5 =$ _____

13. $3 + \underline{\hspace{2cm}} = 6$

14. $+7 = 9$

15. $2+ \quad = 8$

Answer 2.4

11. blank plus 1 equals 3

12. 4 plus 5 equals blank

13. 3 plus blank equals 6

Figure 1 shows five 3x3 dot patterns labeled (a) through (e). Each pattern consists of a 3x3 grid of dots, with some dots filled (black) and others empty (white). The patterns are as follows:

- (a) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (b) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (c) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (d) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (e) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).

14. blank plus 7 equals 9

15. 2 plus blank equals 8

Question 2.5

Write the following problems: number 16: 9 plus 1 equals blank, number 17: 8 plus blank equals 10, number 18: 6 plus 2 equals blank, number 19: 4 plus blank equals 8, and number 20: blank plus 5 equals 7.

16. $9+1 = \underline{\hspace{2cm}}$

17. $8 + \underline{\hspace{2cm}} = 10$

18. $6+2 = \underline{\hspace{2cm}}$

19. $4 + \underline{\hspace{2cm}} = 8$

20. _____ + 5 = 7

Answer 2.5

16. 9 plus 1 equals blank

17. 8 plus blank equals 10

18. 6 plus 2 equals blank

19. 4 plus blank equals 8

Figure 1 shows five 3x3 dot patterns labeled (a) through (e). Each pattern consists of a 3x3 grid of dots, with some dots filled (black) and others empty (white). The patterns are as follows:

- (a) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (b) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (c) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (d) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (e) Filled dots at (1,1), (1,2), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).

20. blank plus 5 equals 7

Figure 1 shows five 3x3 dot patterns labeled (a) through (e). Each pattern consists of a 3x3 grid of positions, with some positions containing a dot. The number of dots in each pattern is: (a) 10, (b) 14, (c) 8, (d) 9, and (e) 12.

Part 3

Part 3 Materials

- Student Braille Document: G1-M1-Check-Up-Student.brf
- G1-M1-Check-Up-Data-Table.docx

Part 3 Teacher Script

Question 3.1

Read the following equations in braille on page 4 in the braille document.

[Make sure the student is viewing the set of equations numbered 1 to 5 at the top of page 4.]

Answer 3.1

Number 1: 5 minus 3 equals what number

Number 2: 4 minus 2 equals what number

Number 3: 1 minus 0 equals 1

Number 4: 5 minus 4 equals what number

Number 5: 3 minus 2 equals what number

Question 3.2

Let's try some more.

[Make sure the student is viewing the set of equations numbered 6 to 10 on page 4.]

The image displays a 4x5 grid of 20 dot patterns. Each pattern is a 4x4 grid of dots, where a black dot represents a value of 1 and a white dot represents a value of 0. The patterns are arranged in four rows of five, showing various combinations of black and white dots on a grid.

Answer 3.2

Number 6: 2 minus blank equals 1

Number 7: blank minus 4 equals 0

Number 8: 6 minus 5 equals blank

Number 9: 10 minus blank equals 7

Number 10: blank minus 6 equals 3

Question 3.3

Now read the equations at the top of page 5, and tell me what number the long dash stands for each time.

The figure consists of two rows of four diagrams each. Each diagram is a 4x4 grid of dots, with some dots filled (black) and others empty (white). The diagrams show different spatial arrangements of these points, representing various configurations in a square lattice.

$5 - 2 = \text{blank}$
 $3 - 2 = \text{blank}$
 $1 - 0 = \text{blank}$
 $6 - 3 = \text{blank}$
 $8 - 4 = \text{blank}$
 $10 - 3 = \text{blank}$

Answer 3.3

Number 1: 5 minus 2 equals blank.
The long dash stands for 3.

Number 2: 3 minus 2 equals blank.
The long dash stands for 1.

Number 3: 1 minus 0 equals blank.
The long dash stands for 1.

Number 4: 6 minus 3 equals blank.
The long dash stands for 3.

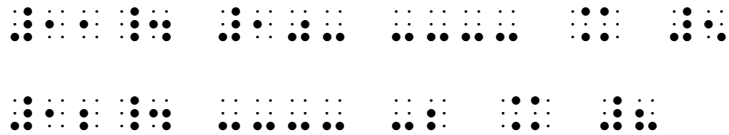
Number 5: 8 minus 4 equals blank.
The long dash stands for 4.

Number 6: 10 minus 3 equals blank.
The long dash stands for 7.

Question 3.4

Let's try some more problems on page 5, beginning with number 7. Once again read the equations and tell me what number the long dash stands for each time. You will find a Nemeth Code terminator after the last equation on the last line of the braille page.

$7 - 1 = \text{blank}$
 $9 - 2 = \text{blank}$
 $4 - 3 = \text{blank}$
 $12 - 5 = \text{blank}$



Answer 3.4

Number 7: blank minus 5 equals 0.
The long dash stands for 5.

Number 8: 4 minus blank equals 1.
The long dash stands for 3.

Number 9: blank minus 3 equals 2.
The long dash stands for 5.

Number 10: 7 minus 3 equals blank.
The long dash stands for 4.

Number 11: 10 minus blank equals 5.
The long dash stands for 5.

Number 12: blank minus 2 equals 8.
The long dash stands for 10.

Part 4

Part 4 Materials

- Braillewriter
- Braille paper
- G1-M1-Check-Up-Data-Table.docx

Part 4 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 4.1

Write the following problems: number 1: 3 minus 2 equals 1 and number 2: 5 minus 1 equals 4.

1. $3-2 = 1$
2. $5-1 = 4$

Answer 4.1

1. 3 minus 2 equals 1

2. 5 minus 1 equals 4

Question 4.2

Write the following problems: number 3: 3 minus 0 equals blank, number 4: 7 minus 5 equals blank, number 5: 9 minus 6 equals blank, and number 6: blank minus 5 equals 0.

3. $3-0 = \underline{\hspace{2cm}}$

4. $7-5 = \underline{\hspace{2cm}}$

5. $9-6 = \underline{\hspace{2cm}}$

6. _____ $-5 = 0$

Answer 4.2

3. 3 minus 0 equals blank

4. 7 minus 5 equals blank

5. 9 minus 6 equals blank

6. blank minus 5 equals 0

Part 5

Part 5 Materials

- Student Braille Document: G1-M1-Check-Up-Student.brf
- Braillewriter
- Braille paper
- G1-M1-Check-Up-Data-Table.docx
- Optional
 - Ten frame (Alternatives: APH Tactile Five and Ten Frames)
 - Pennies (Alternatives: APH Tactile Tokens, magnetic counters)
 - Work tray (Alternative: cookie sheet)
 - Nonslip surface such as a rubber shelf liner or magnetic board to place the ten frame on

Part 5 Teacher Script

Begin on page 6 by reading each problem and answer choices. Pay attention to the sign of operation and then figure out the answer to the problem. Afterwards, write the problem number and letter of the correct answer choice. Then press your line spacing key twice to move to the next line of braille before beginning the next problem.

Question 5.1

[Make sure the student is viewing the first problem on page 6.]

Answer 5.1

1. 6 plus 3 equals blank (or what number)
- a 8
 - b 7
 - c 10
 - d 9

Written Response: 1. d

Question 5.2

[Make sure the student is viewing the second problem on page 6.]

Answer 5.2

2. 7 minus 5 equals blank (or what number)
- a 4
 - b 2
 - c 3
 - d 1

Written Response: 2. b

Question 5.3

Turn to page 7 and continue reading each problem and writing your answer.

3. 9 minus 4 equals blank (or what number)

a 0

b 4

c 5

d 3

Answer 5.3

3. 9 minus 4 equals blank (or what number)

a 0

b 4

c 5

d 3

Written Response: 3. c

3. 9 minus 4 equals blank (or what number)

Question 5.4

[Make sure the student is viewing the second problem on page 7.]

3. 9 minus 4 equals blank (or what number)

a 0

b 4

c 5

d 3

Answer 5.4

4. 2 plus 5 equals blank (or what number)

a 7

b 9

c 5

d 6

Written Response: 4. a

Question 5.5

Turn to page 8 and continue reading each problem and writing your answer.

Answer 5.5

5. 1 plus 3 equals blank (or what number)

a 3

b 4

c 6

d 5

Written Response: 5. b

Question 5.6

[Make sure the student is viewing the second problem on page 8.]

8 minus 2 equals blank (or what number)

a 10

b 9

c 7

d 6

Answer 5.6

6. 8 minus 2 equals blank (or what number)

a 10

b 9

c 7

d 6

Written Response: 6. d

8 minus 2 equals blank (or what number)

Question 5.7

Turn to page 9 and continue to read each problem and answer choices. Pay attention to the sign of operation and then figure out the answer to the problem. Afterwards, tell me which answer choice is correct. You will not write your answer this time.

8 minus 2 equals blank (or what number)

a 10

b 9

Answer 5.7

7. 8 minus blank (or what number) equals 2

- a. 5
- b. 6
- c. 3
- d. 4

The correct answer choice is b.

Question 5.8

[Make sure the student is viewing the second problem on page 9.]

Figure 1 shows five 3x3 dot patterns labeled (a) through (e). Each pattern consists of a 3x3 grid of positions, with some positions containing a black dot. The patterns are as follows:

- (a) Dots at (1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (b) Dots at (1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (c) Dots at (1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (d) Dots at (1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).
- (e) Dots at (1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3).

Answer 5.8

8. Blank (or what number) plus 4 equals 8

The answer choices are:

- a. 6
- b. 3
- c. 4
- d. 5

The correct answer choice is c.

Question 5.9

Turn to page 10 and continue to read each problem and answer choices. Pay attention to the sign of operation and then figure out the answer to the problem. Afterwards, tell me which answer choice is correct. You will not write your answer.

9. Blank (or what number) plus 3 equals 10

a. 6

b. 4

c. 7

d. 8

Answer 5.9

9. Blank (or what number) plus 3 equals 10

The answer choices are:

a. 6

b. 4

c. 7

d. 8

The correct answer choice is c.

Question 5.10

[Make sure the student is viewing the second problem on page 10.]

10. Blank (or what number) minus 2 equals 8

a. 6

b. 4

10. 6 minus blank (or what number) equals 2

The answer choices are:

- a. 3
- b. 4
- c. 5
- d. 2

The correct answer choice is b.

Question 5.11

Turn to page 11 and continue to read each problem and answer choices. Pay attention to the sign of operation and then figure out the answer to the problem. Afterwards, tell me which answer choice is correct. You will not write your answer.

10. 6 minus blank (or what number) equals 2

The answer choices are:

a. 3

b. 4

c. 5

d. 2

Answer 5.11

11. Blank (or what number) minus 2 equals 1

The answer choices are:

- 4
- 0
- 5
- 3

The correct answer choice is d.

Question 5.12

[Make sure the student is viewing the second problem on page 11.]

Answer 5.12

12. Blank (or what number) plus 8 equals 9

The answer choices are:

- a. 0
- b. 8
- c. 1
- d. 2

The correct answer choice is c.