

First Grade Review

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.
- Throughout the script, it is assumed that the student is correct. The teacher may need to go off script if the student does not answer a question correctly.

Review Activity 1

Activity 1 Materials

- Braillewriter
- Braille paper
- Secret Message Game 1: Pages 1-2 of Student Braille Document: G1-Review-Student.brf
- Secret Message Game 2: Pages 3-4 of Student Braille Document: G1-Review-Student.brf
- Optional: answer key in braille

Activity 1 Teacher Notes

- For Secret Message Game 1, have the student solve the addition and subtraction problems on page 1 and 2 to figure out the letter associated with each answer number used in the secret message. Base ten blocks can be used if needed.
- If preferred, students can write the answer below each problem for Game 1.
- As needed, you can assist the student in decoding the message.
- The first game includes only the letters used in the secret message.
- The second game is more challenging as it includes more problems and not all of them are used in the secret message.
- Nemeth Code within UEB Contexts is used in Secret Message 1 since students will be referring back to their math problems in order to reveal the secret message.
- Students can also be challenged to create their own secret message game.

[m: 16 minus 8 equals and t: 7 plus 6 equals]

[s: 18 minus 1 equals and i: 9 plus 9 equals]

[n: 1 plus 4 equals]

That was great work, Nemeth superstar!

In order to reveal the secret message, we need to learn a new symbol. It is called the single-word switch indicator. It tells us that the following word is in UEB (Unified English Braille). Dot 6 is in the first cell, and dot 3 is in the second cell. There will not be a space between the single-word switch indicator and the following word.

Now let's go back to page 2 and locate the section heading below the problems and Nemeth Code terminator. It says Secret Message 1.

The secret message contains 3 words. There is a single-word switch indicator before the word space.

Practice 1.2

Read the numbers that make up the secret message!

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

The figure consists of two rows of ten small square plots each. Each plot contains a set of black dots representing points in a 2D space. The top row shows patterns that are more dispersed and irregular, while the bottom row shows patterns that are more clustered and regular. The plots are arranged in a 2x10 grid.

Practice 1.3

Each number in the message matches one of your answers. Once you find the problem with that answer, then find the letter associated with that particular problem. Finally, reveal the secret message by replacing each number in the secret message with the letter for that problem.

Secret Message Game 2

Begin by finding the first line of braille on page 3. Softly glide your fingers across the line. It says Secret Message. Now move your hands down to the second line of braille on the page. It says Game 2.

On the third line of braille, it says Problem Set 2. It is followed by an opening Nemeth Code indicator.

This game is a little different because the missing number can occur anywhere in the problem.

Find the missing number in each of the problems on page 3 and the top part of page 4. You will need to write both the problem letter and missing number for each problem.

Then reveal the secret message just like you did in Game 1 by replacing each number in the secret message with a letter.

Practice 1.4

[e: blank plus 5 equals 18.]

[r: 14 minus 7 equals blank.]

Figure 1 consists of four 3x3 grids, labeled (a) through (d), each containing a different number of black dots. Grid (a) has 5 dots, (b) has 6 dots, (c) has 7 dots, and (d) has 8 dots. The dots are arranged in various patterns within each grid, representing different family configurations.

[f: 9 minus 8 equals blank.]

[i: 8 plus blank equals 17.]

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).
 (a) Filled dots at (1,1), (1,3), (2,1), (2,2), (2,3).
 (b) Filled dots at (1,1), (1,2), (1,4), (2,1), (2,2), (2,3), (2,4), (3,1), (3,2), (3,3), (3,4).
 (c) Filled dots at (1,1), (1,2), (1,3), (1,4), (2,1), (2,2), (2,3), (2,4), (3,1), (3,2), (3,3), (3,4).
 (d) Filled dots at (1,1), (1,2), (1,3), (2,1), (2,2), (2,3).
 (e) Filled dots at (1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (2,4), (3,1), (3,2), (3,3), (3,4).

[l: blank minus 3 equals 11.]

[j: 0 plus blank equals 15.]

[p: 3 plus blank equals 19.]

[y: blank minus 5 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).
 (a) Top row: 1 white, 2 black; Middle row: 1 black, 1 white, 1 black; Bottom row: 2 black, 2 black.
 (b) Top row: 1 white, 1 white, 1 white; Middle row: 1 white, 1 white, 1 white; Bottom row: 2 black, 2 black, 2 black.
 (c) Top row: 1 white, 1 white, 1 white; Middle row: 1 white, 1 black, 1 white; Bottom row: 2 black, 1 white, 1 black.
 (d) Top row: 1 white, 2 black, 1 white; Middle row: 1 white, 1 white, 1 white; Bottom row: 1 white, 2 black, 1 white.
 (e) Top row: 1 white, 2 black, 1 white; Middle row: 2 black, 2 black, 2 black; Bottom row: 2 black, 1 white, 1 black.

[n: 10 plus 10 equals blank.]

[z: 2 plus 2 equals blank.]

[g: 7 plus 4 equals blank.]

[a: 3 plus blank equals 5.]

[o: 10 minus blank equals 2.]

[s: blank plus 5 equals 10.]

Now locate the section heading below the problems and Nemeth Code terminator. It says Secret Message 2.

This secret message is the answer to a joke. Let's read the joke together on the next two braille lines.

Joke: What has a nose and flies but cannot smell?

This time the secret message has 2 words. There is a single-word switch indicator before the word space.

Do you think you know the answer to the joke? Let's see if you are right!

Practice 1.5

Read the numbers that make up the second secret message!

[Make sure the student is viewing the last two lines of braille on page 4.]

Figure 1 shows the 16 possible configurations of the 4x4 grid. The configurations are arranged in two rows of eight. Each configuration is a 4x4 grid of dots, where some dots are black and others are white. The configurations represent different states of the 4x4 grid, with the top row showing configurations 1 through 8, and the bottom row showing configurations 9 through 16.

Practice 1.6

Once again, the numbers in the message match one of your answers. So you will complete the same process! However, this time not all of the problem letters will be used.

What is the second Secret Message?

Review Activity 2

Activity 2 Materials

- Braillewriter
- Braille paper
- Two small boxes shaped like a cube: one labeled with the Nemeth numbers 1, 2, 3, 4, 5, 6 on the 6 faces and the other labeled with the Nemeth numbers 7, 8, 9, 10, 11, 12
- Timer
- Optional: Feel 'n Peel Stickers: Nemeth Braille-Print Numbers 0-100 from the American Printing House for the Blind

Activity 2 Teacher Notes

- You will need at least 2 players for this game. It can easily be played with several students who read print or braille. If some of the players read print, add print to the homemade cube.
- An easy way to label the dice is with the Feel 'n Peel Stickers: Nemeth Braille-Print Numbers 0-100 from the American Printing House for the Blind.
- The length of time you play and the length of time to write the problems is up to you. You can also consider individualizing the time if the student is playing with sighted peers. If preferred, students can write the problems in linear format. Students can also write inequalities that incorporate the two numbers instead of addition and subtraction problems.
- You can set the timer or one of the students can set the timer each time. This would provide an opportunity to show a student how to use a variety of timers, including timer apps, braille timers, etc.

Activity 2 Teacher Script

Let's begin by making dice out of two small boxes shaped like a cube. First, label one of the dice with the Nemeth numbers 1, 2, 3, 4, 5, and 6. There will be one number on each face of the die. If you need any help, please let me know.

Then, label the other die with the Nemeth numbers 7, 8, 9, 10, 11, and 12. Once again, there will only be one number on each face of the die.

You will need your braillewriter and braille paper to record your answers.

[The other players will also need a way to record their answers.]

Now each player should roll the dice with the numbers 1-6. The player with the highest number will go first.

We will take turns rolling the dice and reading the two numbers. Afterwards, the player who rolled the dice will have 1 minute to write as many as possible spatially aligned addition or subtraction problems with answers that incorporate the two numbers. For example, if you roll 3 and 8, then you could write one or more of the following problems.

[3 plus 8 equals 11, 8 plus 3 equals 11, 8 minus 3 equals 5, 8 minus 5 equals 3, 11 minus 3 equals 8, and 11 minus 8 equals 3]

$$\begin{array}{r} 3 \\ +8 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 8 \\ +3 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 8 \\ -3 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 8 \\ -5 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 11 \\ -3 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 11 \\ -8 \\ \hline 3 \end{array}$$

At the end of the game, whoever has correctly written and answered the most problems is the winner!

Review Activity 3

Activity 3 Materials

- Braillewriter
- Braille paper
- Find the Missing Numbers Activity: Pages 5-8 of Student Braille Document: G1-Review-Student.brf
- Counting to 120 Chart available in braille within the curriculum (Although the double-spaced chart is recommended for most first graders, a single-spaced alternative chart is also available in the curriculum.)

Activity 3 Teacher Notes

- The level of difficulty progresses across the four pages.
- Offer additional assistance as needed.
- If desired, you or the student may cut around the boxes and puzzle pieces on pages 6-8.
- If you are using a screen reader, you will want to select voicing of "all punctuation" in your settings.

Activity 3 Teacher Script

The goal of this activity is to figure out the missing number for each general omission symbol on pieces of the Counting to 120 Chart. You will need the braille activity pages, braille paper, Counting to 120 Chart, and your braillewriter for this activity.

Figure out the missing numbers in each line on page 5, and then write them on another piece of braille paper. Afterwards press your line spacing key twice to move to the next line.

Practice 3.1

[? ? 63 64 ? 66 67 ?]

⠠⠠ ⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠

[101 102 ? 104 ? 106]

⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠ ⠠⠠ ⠠⠠⠠⠠⠠ ⠠⠠ ⠠⠠⠠⠠⠠

[115 116 117 ? ? ?]

⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠ ⠠⠠ ⠠⠠ ⠠⠠

[22 23 24 ? 26 27 28]

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠

[58 ? 60]

⠠⠠⠠⠠ ⠠⠠ ⠠⠠⠠⠠

[82 83 84 ? ? 87 88]

[95 96 ? 98 ? ?]

On the second page of the activity, you will find the missing numbers in braille boxes.

Let's find the missing numbers in the first box together.

Practice 3.2

First locate the box at the top of page 6. Then silently read the numbers and locate the general omission symbols representing missing numbers. Notice that the general omission symbols can be on different lines!

What are the missing numbers? You are welcome to use your Counting to 120 Chart to help you figure out the missing numbers!

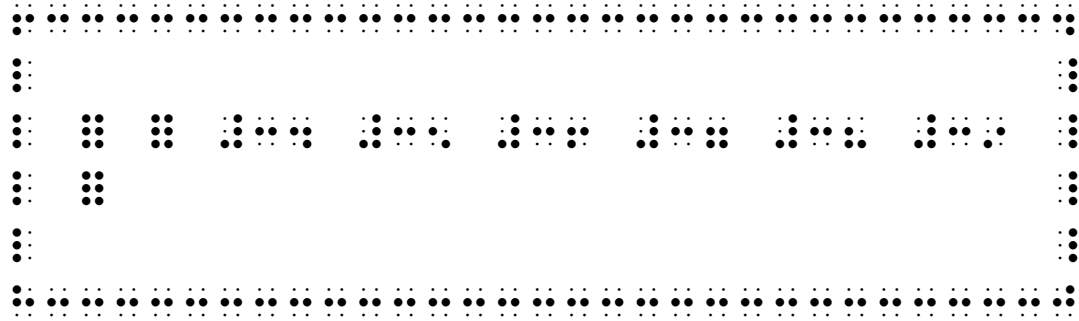
Once you know this information, write the missing numbers on your paper!

[The first braille box on page 6 includes 53, 54, 55, ?, and 57. There is also a question mark above the question mark representing the missing number 56.]

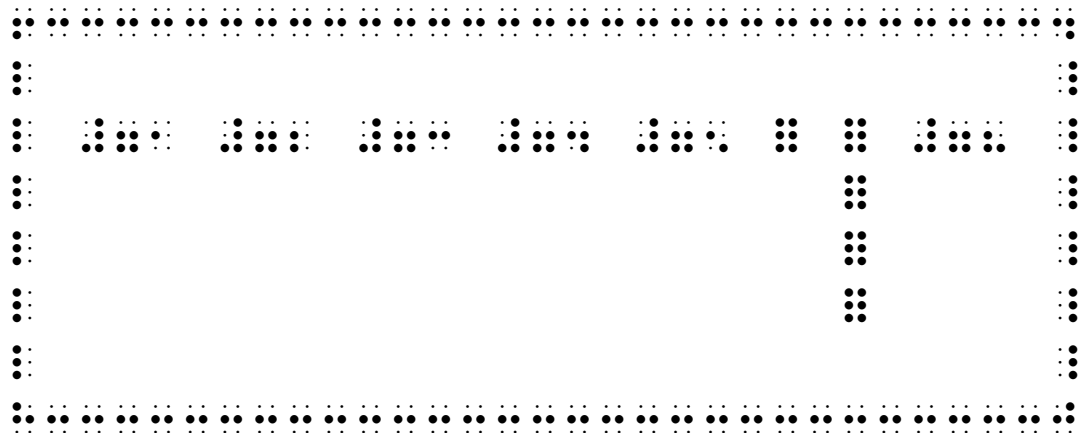
Practice 3.3

Now find the missing numbers in the remaining two boxes!

[The second braille box on page 6 includes ?, ?, 34, 35, 36, 37, 38, and 39. There is also a question mark directly below the question mark representing the missing number 32.]



[The last braille box on page 6 includes 71, 72, 73, 74, 75, ?, ?, and 78. There are also three question marks going vertically down the page, beginning directly below the question mark representing the missing number 77.]



Practice 3.4

On pages 7-8, you will find puzzle pieces of different sizes and shapes. Use the same process to record the missing numbers for each box and puzzle piece.

Remember that you will need to give a missing number for each general omission symbol. Have fun, puzzle master!

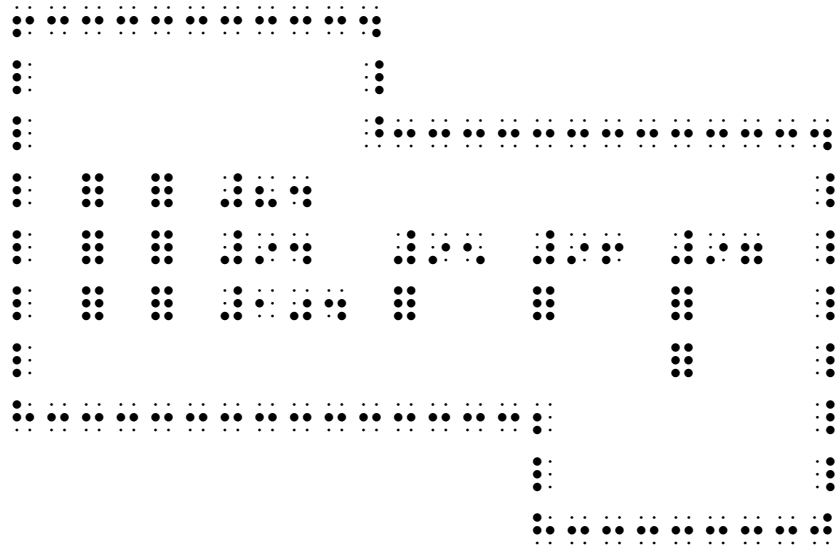
[The braille box at the top of page 7 includes four lines of braille.

Line 1: ? ? 84

Line 2: ? ? 94 95 96 97

Line 3: ? ? 104 ? ? ?

Line 4: ? directly below the last question mark on line 3]



[The braille box at the bottom of page 7 includes four lines of braille.

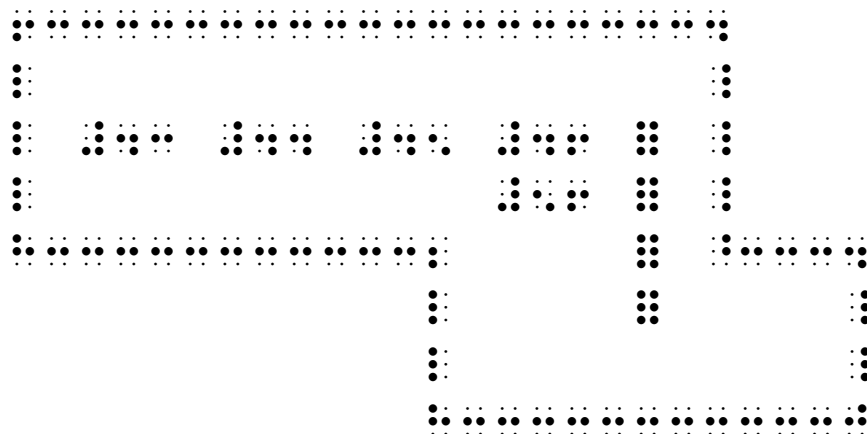
Line 1: 43 44 45 46 ?

Line 2: 56 ?

Line 3: ?

Line 4: ?

The question mark in Lines 2-4 is directly below the question mark representing the missing number 47 in Line 1.]



[The braille box at the top of page 8 includes five lines of braille.

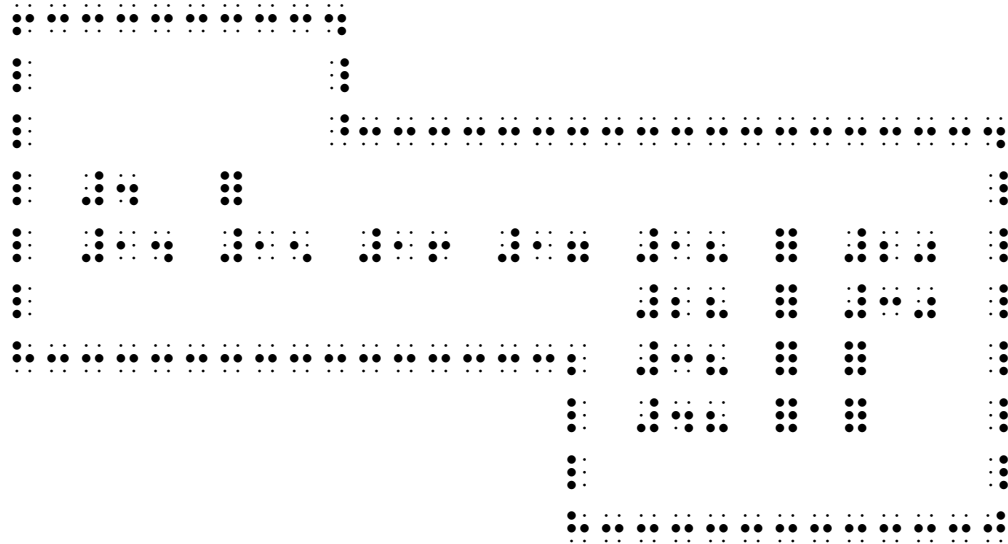
Line 1: 4 ?

Line 2: 14 15 16 17 18 ? 20

Line 3: 28 ? 30

Line 4: 38 ? ?

Line 5: 48 ? ?]



[The braille box at the bottom of page 8 includes five lines of braille.

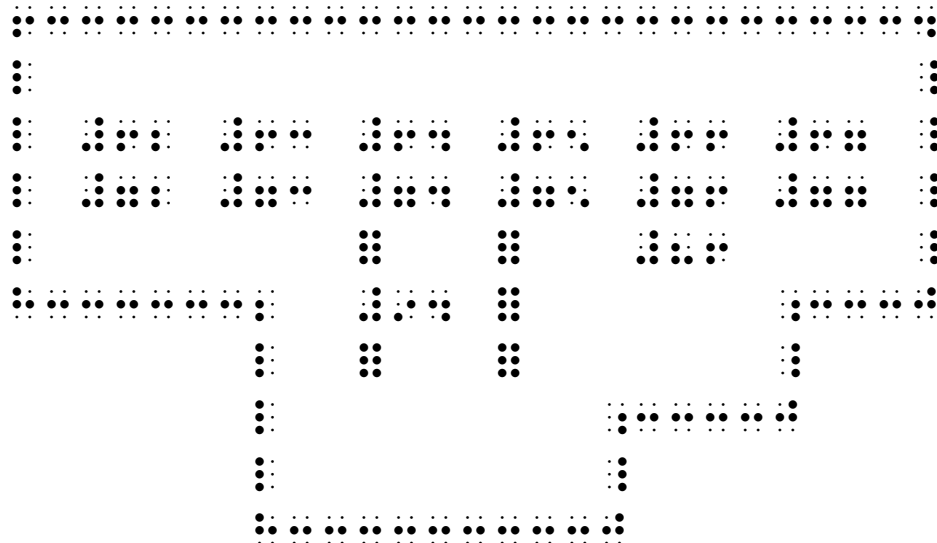
Line 1: 62 63 64 65 66 67

Line 2: 72 73 74 75 76 77

Line 3: ? ? 86

Line 4: 94 ?

Line 5: ? ?



Review Activity 4

Activity 4 Materials

Counting to 120 Chart available in braille within the curriculum (Although the double-spaced chart is recommended for most first graders, a single-spaced alternative chart is also available in the curriculum.)

Activity 4 Teacher Notes

- Offer assistance if the student has difficulty developing clues about their mystery number.
- If desired, the student can develop clues for additional numbers.

Activity 4 Teacher Script

Let's play "Mystery Numbers". The only thing you will need is your Counting to 120 chart. Listen carefully to the clues so that you can guess the mystery number each time.

Do you know what a clue is? It is information that gives you a hint about each mystery number.

Practice 4.1

Here we go. The first mystery number is less than 80, but greater than 75. Just in case you need another clue, the mystery number is 3 more than 74. What is the mystery number?

Practice 4.2

Let's try another. The second mystery number is ten more than 93. What is the mystery number?

Practice 4.3

The third mystery number is more than 100 and less than 120. It is 12 more than 103.

Let's try three more.

Practice 4.4

The fourth mystery number is 11 less than 97.

Practice 4.5

The fifth mystery number is 20 more than 32.

Practice 4.6

The last mystery number is less than 40, greater than 25, and exactly 10 less than 37.

Now it is your turn to give me clues so that I can figure out your mystery number.