

# **First Grade Module 2 Vertical Spatial Problems, Including Problems with Omissions Check-Up Answer Key**

## **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 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**

- Student Braille Document: G1-M2-Check-Up-Student.brf
- G1-M2-Check-Up-Data-Table.docx

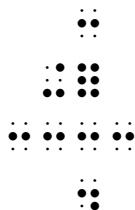
### **Part 1 Teacher Notes**

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 the first problem.

### **Part 1 Teacher Script**

#### **Question 1.1**

Find the general omission symbol in the first problem.



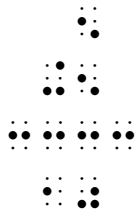
Answer 1.1



The student should locate the general omission symbol in the last braille cell of the second line.

### Question 1.2

Find the plus sign in the second problem.



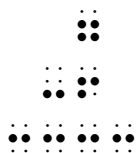
Answer 1.2



The student should locate the plus sign in the first braille cell of the second line.

### Question 1.3

Find the separation line in the last problem on page 1.



Answer 1.3



The student should locate the separation line in the third line of the problem.

### Question 1.4

Find the minus sign in the first problem on page 2.

$$\begin{array}{r} 12 \\ 34 \\ \hline 46 \end{array}$$

Answer 1.4

$$-$$

The student should locate the minus sign in the first braille cell of the second line.

### Question 1.5

Read the vertically aligned problems involving addition within 10, beginning with the second problem on page 2.

$$\begin{array}{r} 12 \\ 34 \\ \hline 46 \end{array}$$

$$\begin{array}{r} 12 \\ 34 \\ \hline 46 \end{array}$$

$$\begin{array}{r} 12 \\ 34 \\ \hline 46 \end{array}$$

$$\begin{array}{r} 12 \\ 34 \\ \hline 46 \end{array}$$

Answer 1.5

4 plus 5 equals

$$\begin{array}{r} 4 \\ +5 \\ \hline \end{array}$$

1 plus 2 equals

$$\begin{array}{r} 1 \\ +2 \\ \hline \end{array}$$

0 plus 8 equals

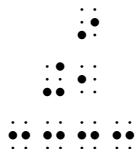
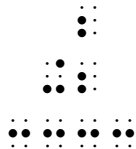
$$\begin{array}{r} 0 \\ +8 \\ \hline \end{array}$$

6 plus 3 equals

$$\begin{array}{r} 6 \\ +3 \\ \hline \end{array}$$

### Question 1.6

Turn to page 3 and read the first two problems on the page.



Answer 1.6

2 plus 2 equals

$$\begin{array}{r} 2 \\ +2 \\ \hline \end{array}$$

9 plus 1 equals

$$\begin{array}{r} 9 \\ +1 \\ \hline \end{array}$$

### Question 1.7

Now read the vertically aligned problems involving subtraction within 10, beginning with the third problem on page 3.

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

$$\begin{array}{r} 6 \\ -5 \\ \hline \end{array}$$

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

### Answer 1.7

8 minus 3 equals

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

6 minus 5 equals

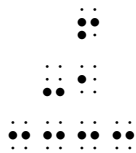
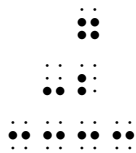
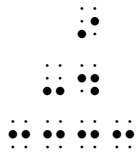
$$\begin{array}{r} 6 \\ -5 \\ \hline \end{array}$$

7 minus 7 equals

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

### Question 1.8

Turn to page 4 and continue reading the problems.



Answer 1.8

9 minus 4 equals

$$\begin{array}{r} 9 \\ -4 \\ \hline \end{array}$$

7 minus 2 equals

$$\begin{array}{r} 7 \\ -2 \\ \hline \end{array}$$

6 minus 1 equals

$$\begin{array}{r} 6 \\ -1 \\ \hline \end{array}$$

### Question 1.9

Turn to page 5 and then read the numbered problems involving addition within 10.

$$\begin{array}{r} 3 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ + 0 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 3 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 10 \\ + 0 \\ \hline 10 \end{array}$$

Answer 1.9

Number 1: 3 plus 2 equals what number?

$$\begin{array}{r} 1. \quad 3 \\ + 2 \\ \hline ? \end{array}$$

Number 2: 10 plus what number equals 10?

$$\begin{array}{r} 2. \quad 10 \\ + ? \\ \hline 10 \end{array}$$

Number 3: what number plus 1 equals 6?

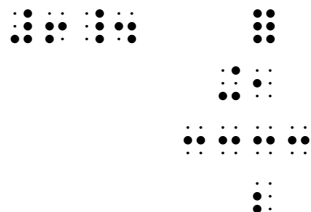
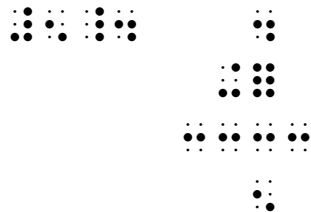
$$\begin{array}{r} 3. \quad ? \\ + 1 \\ \hline 6 \end{array}$$

Number 4: 2 plus 7 equals what number?

$$\begin{array}{r} 4. \quad 2 \\ + 7 \\ \hline ? \end{array}$$

### Question 1.10

Turn to page 6 and read two more problems.



Answer 1.10

Number 5: 4 plus what number equals 5?

$$\begin{array}{r} 5. \quad 4 \\ + ? \\ \hline 5 \end{array}$$

Number 6: what number plus 1 equals 2?

$$\begin{array}{r} 6. \quad ? \\ + 1 \\ \hline 2 \end{array}$$



### Question 1.11

Read the vertically aligned problems involving subtraction within 10, beginning with the first problem on page 7.

$$\begin{array}{r} 10 \\ - 0 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 10 \\ - 0 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 10 \\ - 0 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 10 \\ - 0 \\ \hline 10 \end{array}$$

Answer 1.11

Number 1: 10 minus what number equals 10?

$$\begin{array}{r} 1. \ 10 \\ - \ ? \\ \hline 10 \end{array}$$

Number 2: 8 minus 8 equals what number?

$$\begin{array}{r} 2. \quad 8 \\ \quad -8 \\ \hline \quad ? \end{array}$$

Number 3: what number minus 2 equals 7?

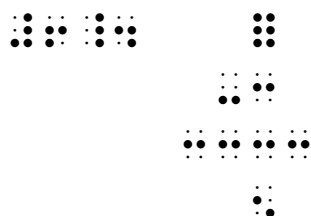
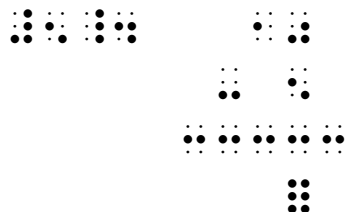
$$\begin{array}{r} 3. \quad ? \\ \quad -2 \\ \hline \quad 7 \end{array}$$

Number 4: 6 minus 1 equals what number?

$$\begin{array}{r} 4. \quad 6 \\ \quad -? \\ \hline \quad 1 \end{array}$$

### Question 1.12

Turn to page 8 and read two more problems.



Answer 1.12

Number 5: 10 minus 5 equals what number?

$$\begin{array}{r} 5. \quad 10 \\ \quad -5 \\ \hline \quad ? \end{array}$$

Number 6: what number minus 3 equals 5?

$$\begin{array}{r} 6. \quad ? \\ -3 \\ \hline 5 \end{array}$$

## Part 2

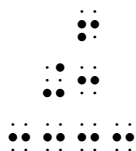
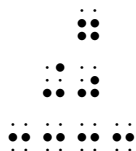
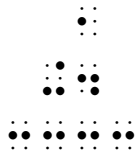
### Part 2 Materials

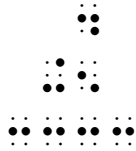
- Student Braille Document: G1-M2-Check-Up-Student.brf
- G1-M2-Check-Up-Data-Table.docx
- Optional
  - Five or ten frames (Alternative: APH Tactile Five and Ten Frames)
  - Pennies (Alternatives: APH Tactile Tokens, magnetic counters)
  - Work tray (Alternatives: cookie sheet)
  - Nonslip surface such as a rubber shelf liner or magnetic board to place the five or ten frames on

### Part 2 Teacher Script

#### Question 2.1

Now read each problem involving addition, beginning at the top of page 9, and then tell me the answer.





Answer 2.1

1 plus 4 equals 5.

$$\begin{array}{r} 1 \\ +4 \\ \hline 5 \end{array}$$

7 plus 0 equals 7.

$$\begin{array}{r} 7 \\ +0 \\ \hline 7 \end{array}$$

6 plus 3 equals 9.

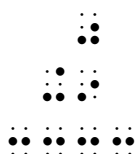
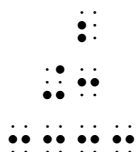
$$\begin{array}{r} 6 \\ +3 \\ \hline 9 \end{array}$$

4 plus 5 equals 9.

$$\begin{array}{r} 4 \\ +5 \\ \hline 9 \end{array}$$

## Question 2.2

Turn to page 10, read two more problems, and tell me each answer.



Answer 2.2

2 plus 3 equals 5.

$$\begin{array}{r} 2 \\ +3 \\ \hline 5 \end{array}$$

0 plus 9 equals 9.

$$\begin{array}{r} 0 \\ +9 \\ \hline 9 \end{array}$$

### Question 2.3

Now read each problem involving subtraction, beginning with the third problem on page 10, and then tell me the answer.

$$\begin{array}{r} 2 \\ -1 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 2 \\ -1 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 2 \\ -1 \\ \hline 1 \end{array}$$

Answer 2.3

2 minus 1 equals 1.

$$\begin{array}{r} 2 \\ -1 \\ \hline 1 \end{array}$$

10 minus 4 equals 6.

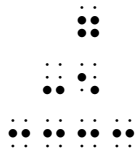
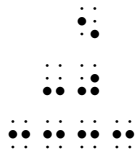
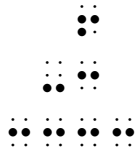
$$\begin{array}{r} 10 \\ -4 \\ \hline 6 \end{array}$$

5 minus 4 equals 1.

$$\begin{array}{r} 5 \\ -4 \\ \hline 1 \end{array}$$

### Question 2.4

Turn to page 11, continue reading each problem, and telling me the answer.



Answer 2.4

6 minus 3 equals 3.

$$\begin{array}{r} 6 \\ -3 \\ \hline 3 \end{array}$$

5 minus 0 equals 5.

$$\begin{array}{r} 5 \\ -0 \\ \hline 5 \end{array}$$

7 minus 5 equals 2.

$$\begin{array}{r} 7 \\ -5 \\ \hline 2 \end{array}$$

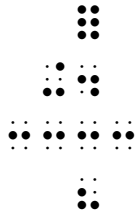
### Question 2.5

Now read each problem involving addition that contains a general omission symbol, beginning at the top of page 12, and then tell me what number is missing.

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

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

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



Answer 2.5

8 plus what number equals 9?

$$\begin{array}{r} 8 \\ + ? \\ \hline 9 \end{array}$$

The missing number is 1.

0 plus 0 equals what number?

$$\begin{array}{r} 0 \\ + 0 \\ \hline ? \end{array}$$

The missing number is 0.

3 plus 2 equals what number?

$$\begin{array}{r} 3 \\ + 2 \\ \hline ? \end{array}$$

The missing number is 5.

What number plus 4 equals 8?

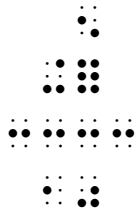
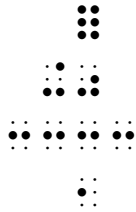
$$\begin{array}{r} ? \\ + 4 \\ \hline 8 \end{array}$$

The missing number is 4.

## Question 2.6

Turn to page 13, continue reading each problem, and telling me what number is missing.





Answer 2.6

What number plus 0 equals 1?

$$\begin{array}{r} ? \\ +0 \\ \hline 1 \end{array}$$

The missing number is 1.

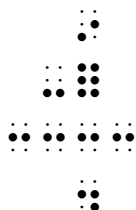
5 plus what number equals 10?

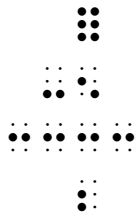
$$\begin{array}{r} 5 \\ + ? \\ \hline 10 \end{array}$$

The missing number is 5.

## Question 2.7

Now read each problem involving subtraction that contains a general omission symbol, beginning with the third problem on page 13. Then tell me what number is missing.





Answer 2.7

9 minus what number equals 4?

$$\begin{array}{r} 9 \\ - ? \\ \hline 4 \end{array}$$

The missing number is 5.

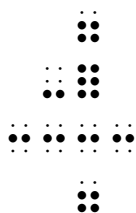
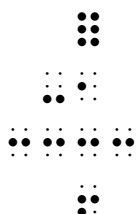
What number minus 5 equals 2?

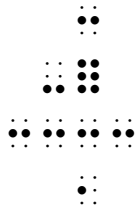
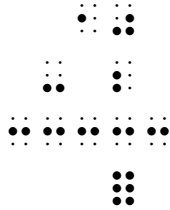
$$\begin{array}{r} ? \\ - 5 \\ \hline 2 \end{array}$$

The missing number is 7.

## Question 2.8

Now turn to page 14, continue reading each problem, and telling me what number is missing.





Answer 2.8

What number minus 1 equals 6?

$$\begin{array}{r} ? \\ -1 \\ \hline 6 \end{array}$$

The missing number is 7.

7 minus what number equals 7?

$$\begin{array}{r} 7 \\ -? \\ \hline 7 \end{array}$$

The missing number is 0.

10 minus 2 equals what number?

$$\begin{array}{r} 10 \\ -2 \\ \hline ? \end{array}$$

The missing number is 8.

3 minus what number equals 1?

$$\begin{array}{r} 3 \\ - ? \\ \hline 1 \end{array}$$

The missing number is 2.

## Part 3

### Part 3 Materials

- Student Braille Document: G1-M2-Check-Up-Student.brf
- Braillewriter
- Braille paper
- G1-M2-Check-Up-Data-Table.docx
- Optional
  - Five or ten frame (Alternative: APH Tactile Five and Ten Frames)
  - Pennies (Alternatives: APH Tactile Tokens, magnetic counters)
  - Work tray (Alternatives: cookie sheet)
  - Nonslip surface such as a rubber shelf liner or magnetic board to place the five or ten frames on

### Part 3 Teacher Script

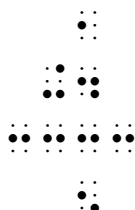
#### Question 3.1

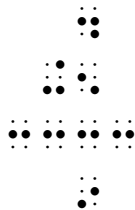
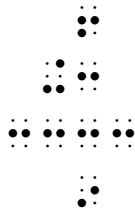
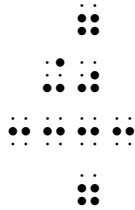
Use your braillewriter to answer the problems on pages 9, 10, and 11 in the student braille document. Begin by placing each page in your braillewriter.

Answer 3.1

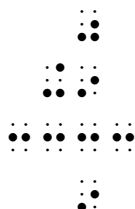
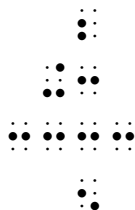
After inserting each page in the braillewriter, the student should braille the answer for each problem directly below the separation line.

Page 9: The student should write 5 below 1 plus 4 equals, 7 below 7 plus 0 equals, 9 below 6 plus 3 equals, and 9 below 4 plus 5 equals.





Page 10: The student should write 5 below 2 plus 3 equals, 9 below 0 plus 9 equals, 1 below 2 minus 1 equals, 6 below 10 minus 4 equals, and 1 below 5 minus 4 equals.



$$\begin{array}{c} \text{6} \\ \text{5} \\ \text{6} - \text{3} = \text{3} \end{array}$$

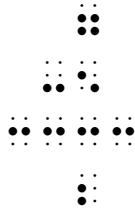
$$\begin{array}{c} \text{5} \\ \text{5} \\ \text{5} - \text{0} = \text{5} \end{array}$$

$$\begin{array}{c} \text{7} \\ \text{2} \\ \text{7} - \text{5} = \text{2} \end{array}$$

Page 11: The student should write 3 below 6 minus 3 equals, 5 below 5 minus 0 equals, and 2 below 7 minus 5 equals.

$$\begin{array}{c} \text{6} \\ \text{5} \\ \text{6} - \text{3} = \text{3} \end{array}$$

$$\begin{array}{c} \text{5} \\ \text{5} \\ \text{5} - \text{0} = \text{5} \end{array}$$



### Question 3.2

Listen and then braille what you hear. Remember that all of the problems will be vertically aligned. In addition, the problems will not be numbered.

After each problem, press the line spacing key twice. Let me know if you need for me to repeat what you should braille.

Write the following spatial problems: 7 plus 3 equals, 2 plus 6 equals, 2 plus 5 equals, 8 plus 1 equals, 4 plus 4 equals, and 10 plus 0 equals.

$$\begin{array}{r} 7 \\ +3 \end{array}$$

$$\begin{array}{r} 2 \\ +6 \end{array}$$

$$\begin{array}{r} 2 \\ +5 \end{array}$$

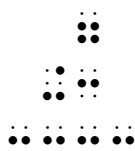
$$\begin{array}{r} 8 \\ +1 \end{array}$$

$$\begin{array}{r} 4 \\ +4 \end{array}$$

$$\begin{array}{r} 10 \\ +0 \end{array}$$

### Answer 3.2

The student should write the following problems spatially: 7 plus 3 equals, 2 plus 6 equals, 2 plus 5 equals, 8 plus 1 equals, 4 plus 4 equals, and 10 plus 0 equals.



$$\begin{array}{r} 6 \\ -2 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 6 \\ -2 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 6 \\ -2 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 6 \\ -2 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 6 \\ -2 \\ \hline 4 \end{array}$$

### Question 3.3

Let's braille some more vertically aligned problems. This time the problems are numbered. Let me know if you need for me to repeat what you should braille.

Write the following spatial problems: number 1: 6 minus 2 equals, number 2: 10 minus 4 equals, number 3: 7 minus 3 equals, number 4: 9 minus 1 equals, number 5: 5 minus 0 equals, and number 6: 8 minus 7 equals.

$$\begin{array}{r} 1. \quad 6 \\ \quad -2 \\ \quad \hline \end{array}$$

$$\begin{array}{r} 2. \quad 10 \\ \quad -4 \\ \quad \hline \end{array}$$



$$\begin{array}{r} 3. \quad 7 \\ \quad \underline{-3} \end{array}$$

$$\begin{array}{r} 4. \quad 9 \\ \quad \underline{-1} \end{array}$$

$$\begin{array}{r} 5. \quad 5 \\ - 0 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 8 \\ \underline{-7} \end{array}$$

### Answer 3.3

The student should write the following problems spatially: number 1: 6 minus 2 equals, number 2: 10 minus 4 equals, number 3: 7 minus 3 equals, number 4: 9 minus 1 equals, number 5: 5 minus 0 equals, and number 6: 8 minus 7 equals.

$$\begin{array}{r}
 5 \\
 +4 \\
 \hline
 ?
 \end{array}$$

### Question 3.4

Listen and then braille what you hear. Remember that all of the problems will be vertically aligned. Let me know if you need for me to repeat what you should braille.

Write the following spatial problems: 5 plus 4 equals what number, what number plus 2 equals 6, and what number plus 3 equals 8.

$$\begin{array}{r}
 5 \\
 +4 \\
 \hline
 ?
 \end{array}$$

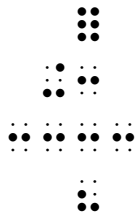
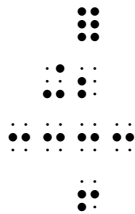
$$\begin{array}{r}
 ? \\
 +2 \\
 \hline
 6
 \end{array}$$

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

### Answer 3.4

The student should write the following problems spatially: 5 plus 4 equals what number, what number plus 2 equals 6, and what number plus 3 equals 8.

$$\begin{array}{r}
 5 \\
 +4 \\
 \hline
 ?
 \end{array}$$



### Question 3.5

Write the following spatial problems: 10 minus 7 equals what number, 2 minus what number equals 0, and 9 minus what number equals 1.

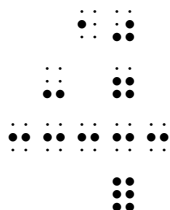
$$\begin{array}{r} 10 \\ -7 \\ \hline ? \end{array}$$

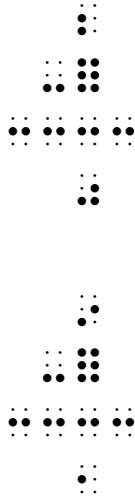
$$\begin{array}{r} 2 \\ -? \\ \hline 0 \end{array}$$

$$\begin{array}{r} 9 \\ -? \\ \hline 1 \end{array}$$

Answer 3.5

The student should write following problems spatially: 10 minus 7 equals what number, 2 minus what number equals 0, and 9 minus what number equals 1.





## Part 4

### Part 4 Materials

- Student Braille Document: G1-M2-Check-Up-Student.brf
- Braillewriter
- Braille paper
- G1-M2-Check-Up-Data-Table.docx
- Optional
  - Five or ten frames (Alternative: APH Tactile Five and Ten Frames)
  - Pennies (Alternatives: APH Tactile Tokens, magnetic counters)
  - Work tray (Alternatives: cookie sheet)
  - Nonslip surface such as a rubber shelf liner or magnetic board to place the five or ten frames on

### Part 4 Teacher Script

#### Question 4.1

Silently read each problem, beginning at the top of page 15, and find the general omission symbol. Then figure out the missing number to make each equation true. Afterwards, write the problem number and the missing number. Then press your line spacing key twice to move to the next line of braille before beginning the next problem.

$$\begin{array}{c} \text{⠠⠠⠠⠠⠠⠠} \quad \text{⠠⠠} \\ \text{⠠⠠⠠} \quad \text{⠠⠠⠠} \\ \text{⠠⠠⠠⠠⠠⠠} \\ \text{⠠⠠} \end{array}$$

$$\begin{array}{c} \text{⠠⠠⠠⠠⠠⠠} \quad \text{⠠⠠} \\ \text{⠠⠠⠠} \quad \text{⠠⠠⠠} \\ \text{⠠⠠⠠⠠⠠⠠} \\ \text{⠠⠠} \end{array}$$

$$\begin{array}{c} \text{⠠⠠⠠⠠⠠⠠} \quad \text{⠠⠠⠠} \\ \text{⠠⠠} \quad \text{⠠⠠⠠} \\ \text{⠠⠠⠠⠠⠠⠠⠠⠠} \\ \text{⠠⠠} \end{array}$$

#### Answer 4.1

The student should write:

Number 1: 1

$$\text{⠠⠠⠠⠠⠠⠠} \quad \text{⠠⠠⠠} \quad \text{⠠⠠⠠}$$

Number 2: 10

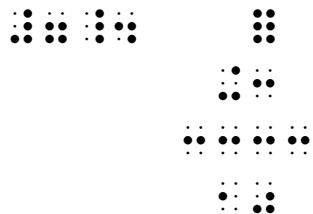
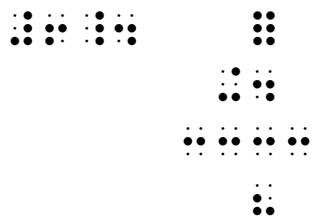
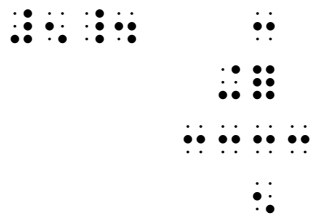
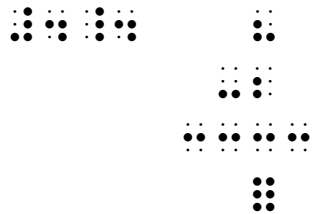
$$\text{⠠⠠⠠⠠⠠⠠} \quad \text{⠠⠠⠠} \quad \text{⠠⠠⠠⠠⠠}$$

Number 3: 4

$$\text{⠠⠠⠠} \quad \text{⠠⠠⠠} \quad \text{⠠⠠⠠}$$

#### Question 4.2

Turn to page 16, continue reading the problems silently, and writing the missing number. Don't forget to write the problem number too!



Answer 4.2

Number 4: 6



Number 5: 2



Number 6: 4



Number 7: 7

### Question 4.3

Turn to page 17, continue reading the problems silently, and writing the missing number.

### Answer 4.3

Number 8: 1

Number 9: 3

Number 10: 9