An Introduction to Nemeth Code Symbols Used in Grades 2 to 5 and Strategies for Supporting Elementary Students in Building Math Skills

Lesson 4: Formatting Materials for Students in Grades 2-5

University of South Carolina Upstate, Summer 2020

Lesson 4 Objectives

Participants will be able to:

1. Locate and use formatting resources

2. Format the following:
   - Braille and print page numbers
   - Directions
   - Numbered problems
   - Tables

Formatting Materials for Students in Grades 2-5

Predictable materials allow students of all ages to:

- Focus on content
- Quickly scan the page with their hands to get an overview of the page
- Quickly scan pages to locate a specific print page, heading, set of problems, etc.
- Access information and be efficient!

Resource to Use in Formatting Braille Materials

- *Braille Formats: Principles of Print-to-Braille Transcription, 2016* referred to as "Braille Formats."
  - o http://brailleauthority.org/formats/formats2016.html
  - o Available from the Braille Authority of North America (BANA)
  - o *Braille Formats* is for transcribers, but TSVIs and paraprofessionals preparing braille materials need to understand many of the concepts explained in this codebook.

- *Guidance for Transcription Using the Nemeth Code within UEB Contexts*
  - http://www.brailleauthority.org/mathscience/math-science.html
  - Information about formatting on pages 15-21, includes example problems and a table.

Formatting Basics for Students in Grades 2-5

- Materials are single-spaced.

- BANA refers to titles as "centered headings."

- Center the title of a worksheet on the first line of the page, and leave a blank line following it.

- Follow print for the sequence of problems, punctuation, and capitalization.

- Do not change the wording of directions or problems.

Print Worksheet Example

Mixed Review

Directions

Solve each multiplication and division problem.

1. $64 \div 8 =$ _____

2. $7 \times 3 =$ _____
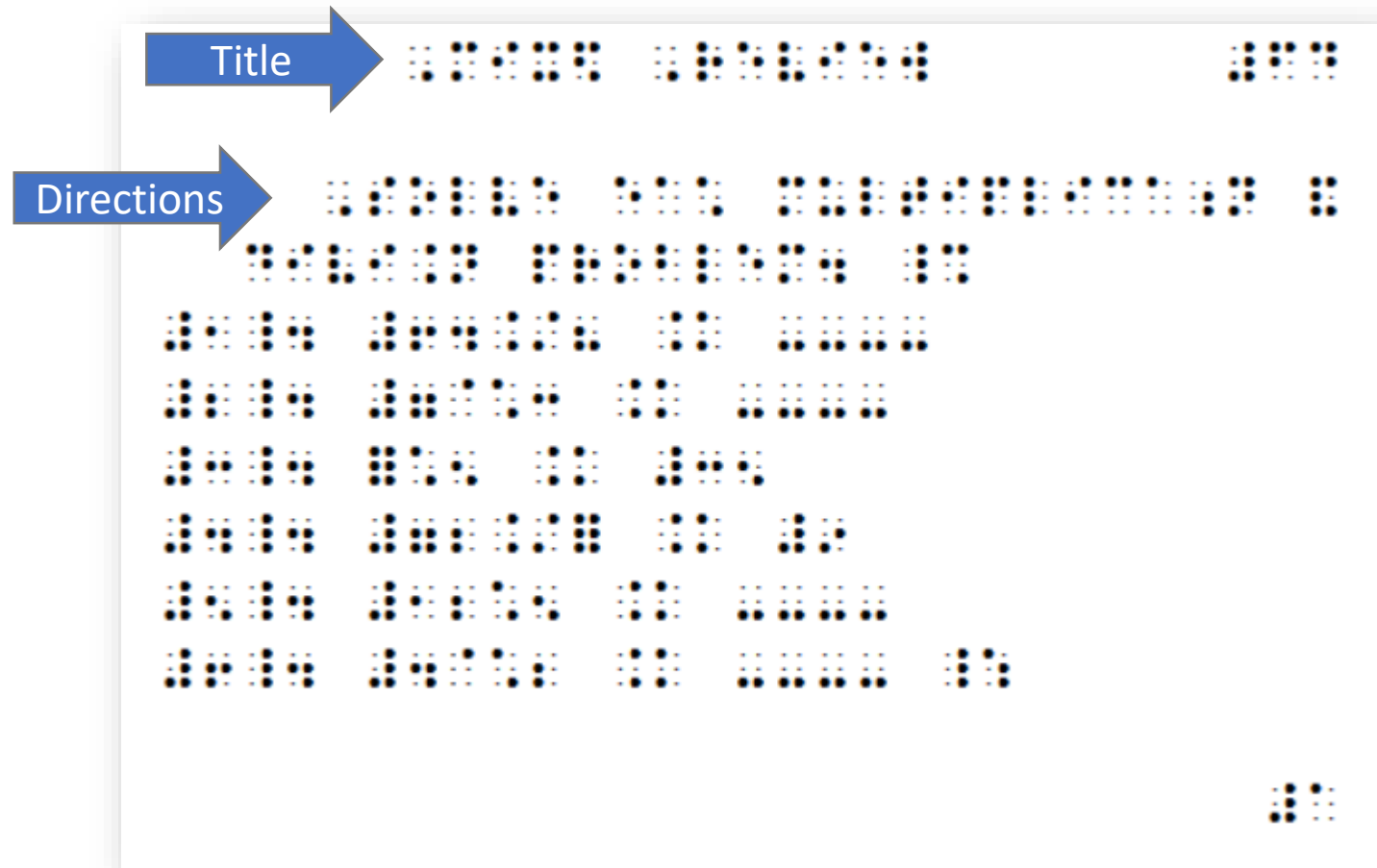
3. $? \cdot 5 = 35$

4. $72 \div ? = 9$

5. $12 \cdot 5 =$ _____

6. $4 \times 2 =$ _____

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Example Worksheet in Braille

- The title is centered.
- A blank line follows the title.
- Directions are followed by numbered problems
- Begin directions in cell 5 with runover lines beginning in cell 3.
- Problems begin in cell 1.

Page Numbering

- All page numbers are in UEB.
- Leave 3 braille cells between the text on the line and the page number.
- The print page number is placed at the end of the first line of the page.
- If the transcription of a print page extends to a second braille page, put the letter "a" in front of the print page number. For a third braille page, put the letter "b."
- Braille page numbers are consecutive: 1, 2, 3, etc.
- The braille page number is placed at the end of the bottom line of the page.

Page Number Example

Mixed Review

Solve each multiplication and division problem.

1. $64 \div 8 = $ _____

2. $7 \times 3 = $ _____

3. $? \cdot 5 = 35$

4. $72 \div ? = 9$

5. $12 \cdot 5 = $ _____

6. $4 \times 2 = $ _____

64
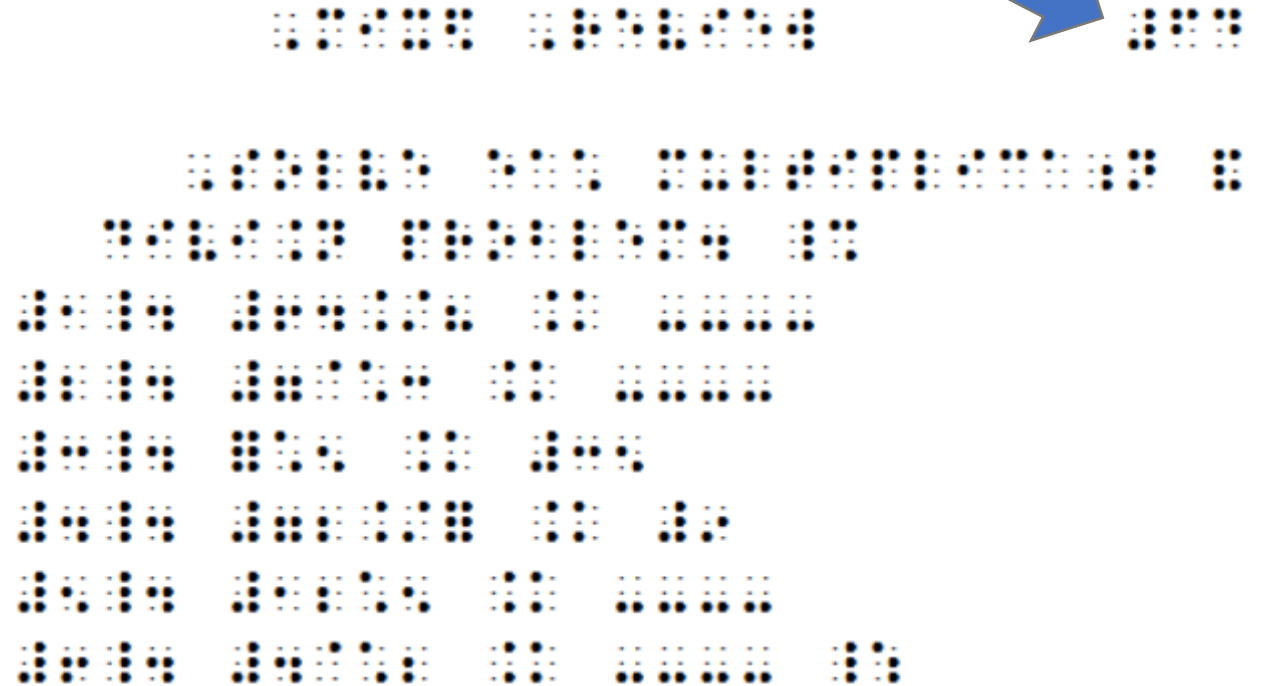
Braille page number

Activity 4A

Decide if each statement is true or false.

1. The title of a worksheet is centered.
2. Use Nemeth numbers for page numbers when preparing a math worksheet.
3. Follow print capitalization when brailling a math worksheet.
4. Most materials for students in second grade are double-spaced.
5. It is allowed to change the order of the problems when preparing a math worksheet in braille.

Activity 4A: Answer Key

1. True – The title of a worksheet is centered.
2. False – Use UEB numbers for page numbers when preparing a math worksheet.
3. True – Follow print capitalization when brailling a math worksheet.
4. False – Most materials for students in second grade are single-spaced.
5. False – Do not change the order of problems when preparing a math worksheet in braille.

Numbered Problems with No Answer Choices

Begin in cell 1 with runover lines in cell 3.

1. What is the total when 28 is added to 49?

⠼⠁⠲ ⠠⠺⠓⠁⠞ ⠊⠎ ⠞⠓⠑ ⠞⠕⠞⠁⠇ ⠺⠓⠢ ⠼⠃⠓ ⠊⠎ ⠁⠙⠙⠫
⠞⠕ ⠼⠙⠊⠦

2. Three students added their money together. They have $12, $3, and $9. How much do they have altogether?

⠼⠃⠲ ⠠⠞⠓⠗⠑⠑ ⠎⠞⠥⠙⠢⠞⠎ ⠁⠙⠙⠫ ⠞⠓⠑⠊⠗ ⠍⠕⠝⠑⠽
⠞⠕⠛⠑⠮⠗⠲ ⠠⠮⠽ ⠓⠁⠧⠑ ⠘⠎⠼⠁⠃⠂ ⠘⠎⠼⠉⠂ ⠯ ⠘⠎⠼⠊⠲
⠠⠓⠪ ⠍⠥⠡ ⠙⠕ ⠮⠽ ⠓⠁⠧⠑ ⠁⠇⠞⠕⠛⠑⠮⠗⠦

Numbered Problems with Answer Choices

- BANA refers to answer choices as subdivisions.
- Begin problems in cell 1 with runover lines in cell 5.
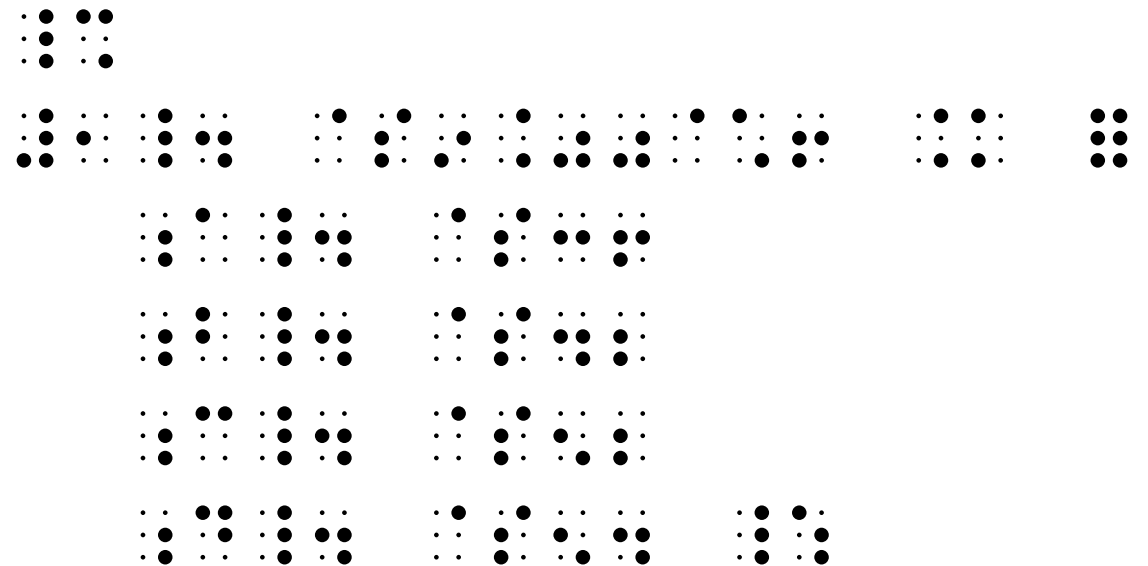- Begin answer choices in cell 3 with runover lines in cell 5.

1. $9.00 X 6 = ?
   a. $36
   b. $42
   c. $52
   d. $54

Creating Tables in Braille

- When the body of a table requires one page or less in braille, do not divide the table between two braille pages.

- Center the title of the table and follow print for capitalization.

- Tables begin in cell 1.

- Use box lines when a table in print is enclosed in a box.

- A top box line is a row of ⠶⠶⠶⠶ (dots 2-3-5-6).

- A bottom box line is a row of ⠛⠛⠛⠛ (dots 1-2-4-5).

Creating Tables in Braille (continued)

- Column headings and entries in a row must end on the same braille line.

- A column separation line ⠐⠒⠒ (dot 5, dots 2-5) separates a column heading from the material below.

- The column separation line goes across the length of the column.

- Guide dots ⠐⠐⠐⠐⠐ (2 or more cells of dot 5) "guide" the reader in following from one column to the next.

- Tables consisting entirely of words and whole numbers are transcribed in UEB.

Example of a Table

- The Nemeth Code switch indicators begin in cell 1.

- The Nemeth Code opening indicator follows the column headings.

- The Nemeth Code terminator follows the last line of entries.

- Use the long dash for blank entries to be filled in.

- Remember, no contractions are used in Nemeth code!

Place Value Practice

Fill in the table.

Standard Form	Expanded Form	Word Form
76		
		thirty-three
	60+8	
125		
		seven hundred
	500+40+2	
809		
		four hundred ninety-two
	200+80+5	
354		

Activity 4B

Prepare this worksheet in braille. In order to practice brailling page numbers, put the table on one braille page and the questions on a second braille page.

Jackie's Team Sports

Use the table to answer questions 1-2.

| Item:	Item Price:
Jacket	$53
Athletic Pants	$24
Sweatshirt	$32
T-shirt	$14

1. There are 16 players on the baseball team. How much would it cost Coach Suarez to order each player a jacket?

a. $846

b. $848

c. $838

2. Molly ordered 12 sweatshirts, and Pedro ordered 23 t-shirts. Guillermo ordered 15 pairs of athletic pants. How much did Molly and Pedro spend?

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This print worksheet was created and happily shared by a group of 5th grade math teachers in South Carolina!

Activity 4B: Answer Key
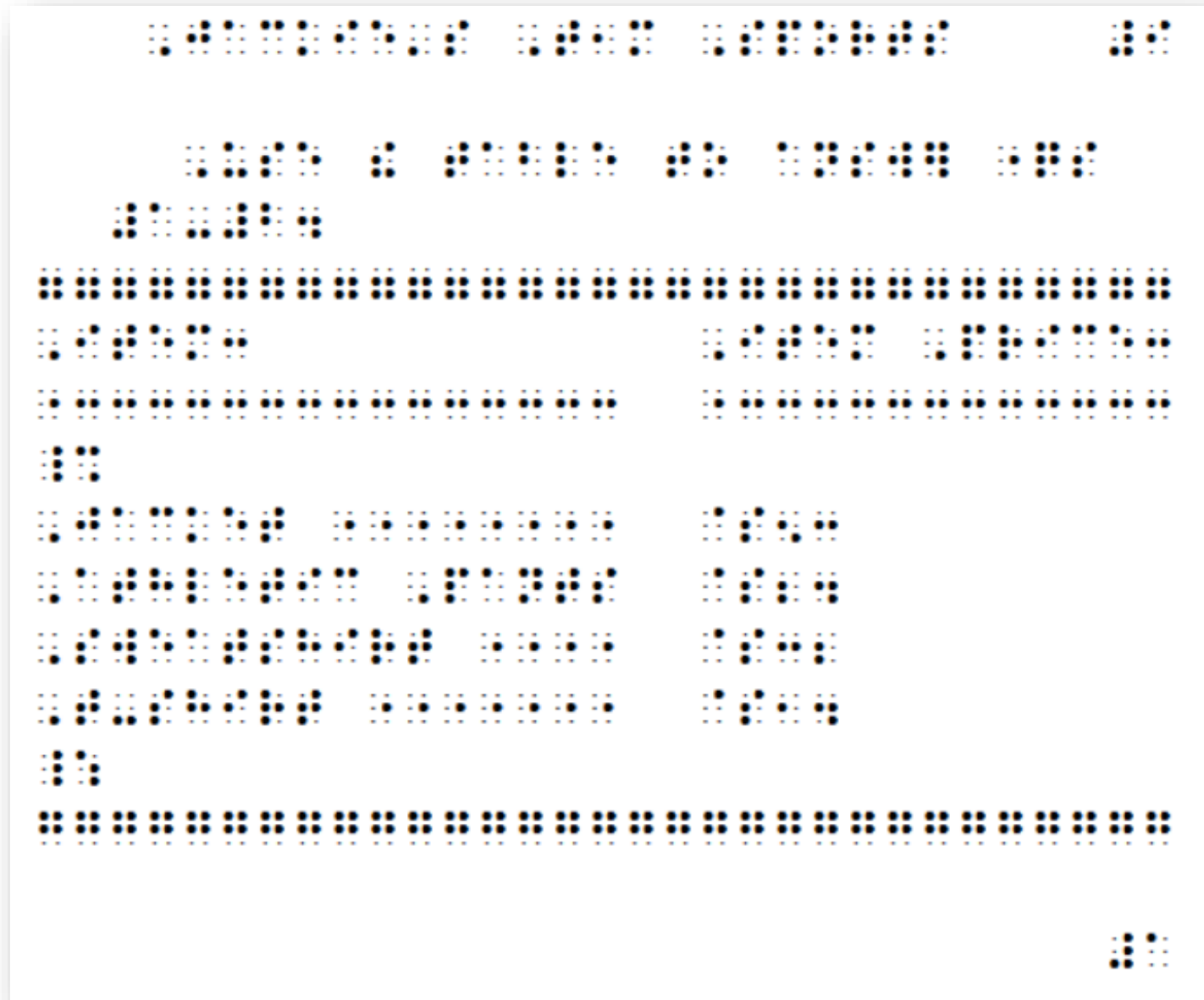
Activity 4B: Answer Key (continued)