AN INTRODUCTION TO BRAILLE MATHEMATICS USING UEB WITH NEMETH A Course for Transcribers

ERRATA AND IMPROVEMENTS

9-20-2024

Please make the following changes to your copy of the Nemeth lesson manual which was uploaded to the NFB website on April 17, 2024. You may report errors to us at transcribers@nfb.org.

PRELIMINARY LESSON

 Page P-17, Practice B commentary (page 16 in the braille document): Change "degrees Kelvin" to "Kelvin units"

LESSON 1

- Page 1–7, Example 1-10: Correct the braille to match print by moving the word "sign" after the Nemeth Code terminator following the percent symbol.
- *Print copy only* Page 1–21, Example 1-41: In the simulated braille, the word "to" should be moved to the beginning of line 2.
- *Print copy only* Page 1–22, Example 1-42: In the simulated braille, the word "just" should be moved to the beginning of line 2.

LESSON 2

- Page 2–5, Section 2.5: Replace "on the previous page" with "in Section 2.4". Delete the sentence in parentheses.
- Page 2–6, Insert this sentence right before Example 2-7: "Note that the hyphen and dash do not require a punctuation indicator. Review Section 1.7 in Lesson 1."

LESSON 3

- Page 3–10, Example 3-26: Add a period to the end of the example. In braille, place the period after the Nemeth Code terminator. Add this to the commentary: Notice that the period is placed outside of the code switch because it does not apply to the abbreviation "cm".
- Page 3–14, Section 3.7.8: Replace the "Correct/Incorrect" illustration and the following sentence with this:

Recall from Lesson 2 that paired grouping symbols must be transcribed in the same code. Thus, one must switch out of Nemeth to transcribe one word contained between grouping signs.

▶ 17.3 (or) 1.73

- Page 4–23, Section 4.17.3.b: Add this sentence to the end of the paragraph: "Grouped items are not divided between braille lines."
- Page 4–24, Example 4-46: Add this sentence to the end of the commentary: "The set is not divided between braille lines, according to "keep together" rules for grouped Nemeth items."
- Page 4–28, Example 4-51: Change the simbraille to:

- Page 4–28, Section 4.21: Insert a third sentence: "The proximity of a sign of comparison does not change this rule."
- Page 4–29, Section 4.21: Add another sample:

— Page 4–42, Practice 4H commentary (page 63 in the braille document): Add this comment:

Line 8: Each letter P requires an English-letter indicator because, with the grouping symbols removed, the letter is preceded by punctuation (hyphen) or a space and is followed by a space. This defines the letter to be a "single letter" according to Section 3.11.1.ii. A "single letter" needs an English-letter indicator. See Section 3.12 in Lesson 3.

LESSON 5

- Page 5–33, Example 5-31, braille line 1: change this to start in cell 5. Change the commentary for line 1 and lines 2-3 to "cell-5 heading".
- Page 5–33, Section 5.11.1: Replace the entire paragraph with this:
 - 5.11.1 **Keep Together.** An exercise set consists of instructions followed by related problems. If an exercise set will fit on one page, it should not be divided between braille pages. If an exercise set requires more than one braille page, *Braille Formats* states that the instructions (directions) should be on the same braille page as at least one of the questions or problems to which they apply.
- *Braille copy only* Last page of Lesson 5, add this sentence to the instructions to Exercise 5: "In sentence 36, the lettered answer cues should follow *Braille Formats* spacing rules—do not insert a space before each associated long dash."

LESSON 6

— Page 6–13, Example 6-20, commentary: Delete the second sentence.

LESSON 7

- Page 7–9, Section 7.1.6: Insert a new example Example 7-8 which appears at end of this document; renumber the next two examples Example 7-9 and Example 7-10.

- Page 7–11: Delete Section 7.1.7 and (former) Example 7-10.
- Page 7–40, Practice 7B commentary (page 17 in the braille document): Replace the commentary for lines 13-16 with this:
 - Lines 13-16: Nemeth must be terminated before transcribing each word that is enclosed in parentheses because (1) a single-word switch indicator cannot be placed immediately before an opening parenthesis (Lesson 3, Section 3.7.8); (2) grouping symbols must be transcribed in the same code (Lesson 2, Section 2.13).
- *Braille copy only* Last page of Lesson 7: Delete the last sentence in the Instructions for Exercise 7 regarding Section 7.1.7.

- Page 8–11:
 - *Print copy only* Practice 8B, item E): The first fraction should be printed as shown below.

E) In $y^{1/5}$, y is the coefficient of the fraction 1/5.

- Practice 8B, item F): Insert ("rise over run") as shown below.
 - F) True/False: The rise/run ("rise over run") ratio is 5 in graph A.
- Print copy only Page 8-15, Section 8.6.1, top of page 8-15: Delete the extra word "shown".
- Page 8–31, Section 8.22.1, second bullet: change to "Each link begins on a new braille line, indented two cells to the right of the anchor."
- Page 8–42, Practice 8B (page 21 in the braille document):
 - *Print copy only* Item C), line 8: Insert letter "y" in cell 6:
 - Item F): Insert ("rise over run") as shown below and delete the opening switch at the end.
 Item F): Insert ("rise over run") as shown below and delete the opening switch at the end.
 - Item G): Change the identifier to be in UEB with the opening Nemeth Code indicator following.

- Delete commentary for line 12; then insert the following three comments.
- *Line 10: This is not a mixed number because it contains a letter (y). Simple fraction indicators are used because the numerator and denominator are not printed on the baseline.*
- Line 12: The first slash is in literary context. A switch to Nemeth is required for the second slash because it means "over".
- *Lines 13-14: "Graph A" does not need to be on the same line. The "keep together" rule applies only to abbreviations.*

- Print copy only Page 9-20, Section 9.17.2.b: Change "in the Eexamples" to "in Examples"
- *Print copy only* Page 9–50, Practice 9D: The heading at the bottom of page 9-50 belongs at the top of page 9-51.

LESSON 10

- Page 10–38, Practice 10E (pages 66 and 67 in the braille document):
 - Line 2: Place the opening Nemeth Code indicator in cell 3
 - Replace the comment for line 2 with the following:
 - Line 2: There is not room for the opening Nemeth Code indicator on line 1. It is placed in the runover cell for instructions (cell 3) because an itemized spatial arrangement follows. See Section 9.30 in Lesson 9.

LESSON 12

- *Print copy only* Page 12–47, Practice 12I, Line 5: Delete the comma (dot 2) between "Notation" and "2022."

LESSON 13

- Page 13–28, Section 13.10.4: Replace the second sentence with this: "The reference symbol used with the note must be the same reference symbol used in the body of the text."

LESSON 17

- *Print copy only* Page 17–51, Practice 17L, line 4, last word: Misformed capitalization indicator: change (46) to (6).
- Print copy only Page 17–52, Practice 17M, line 15: Subitem c) should begin in cell 3.

LESSON 18

- Page 18–11, Example 18-11, braille lines 1-2: The table heading should be centered on two lines.
- Print copy only Page 18-17, Example 18-16, braille line 2: Contract the word "below".
- Page 18–21, top of page: Insert this heading before the table: *Example 18-17, alternate option*
- *Print copy only* Page 18–21, Example 18-17, braille lines 5-7: Each number in column three should begin with a numeric indicator.

- Page 19–2, Section 19.2: Delete the second sentence in the **Back matter** paragraph.
- *Print copy only* Page 19–14, Practice 19E, page 177, last line: Delete the letter "m" between the word "is" and "tan".
- Page 19–23 (page 33 in the braille document) Add these comments for Practice 19D, sample braille page 5:

Line 7: In embedded format the opening switch is placed on the same line as the math. Line 17: The leftmost cell of the spatial arrangement is placed in the appropriate display cell (cell 5).

Line 25: The linear portion continues in the runover cell of item 5 (cell 3). Line 25: There is no need to switch out of Nemeth for the UEB braille page number.

Page 19–24 (page 34 in the braille document) – Add these comments for Practice 19D, sample braille page 6:

Lines 11 and 16: In embedded format the opening switch is placed on the same line as the math. Lines 20-23: Each link begins on a new line in nested linked expression format.

- *Print copy only* Page 19–25, Practice 19D, sample braille page 7, line 25: The braille page number should be in cells 39 and 40. Move it to the right one cell.

— Page 19–27, Practice 19E, sample braille page 9 – Correct these errors:

Line 2: The words "and the" will fit at the end of line 2 (the braille document is correct). Line 7: Insert a space after the first "tan" (cell 13 should be blank). Line 8: Insert a minus symbol (36) in cell 19, before the second "tan".

EXERCISE PACKET

If you received the Exercise Packet in 2024, please discard it. Registered students are now receiving each lesson exercise as they progress through the course with their NFB grader.

LESSON 7, page 7–9

— Insert this new example in Section 7.1.6.

Example 7-8

- 1. Here is how to simplify the expression $4x^2 + 3x(-9x + 6)$.
 - a. Use the distributive property to isolate the terms.

 $4x^{2} + 3x(-9x) + 3x(6)$

b. Clear the parentheses.

 $4x^2 - 27x^2 + 18x$

c. Combine like terms by adding coefficients.

 $-23x^2 + 18x$

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Lines 1-2: Main item begins in cell 1; runover line is in cell 5. (1-5)
Lines 3-4: Subdivision begins in cell 3; runover line is in cell 5. (3-5)
Line 5: Displayed math is in cell 7, two cells to the right of the runover of the subdivision.
Line 7: The displayed expression begins in cell 7 even though the preceding subdivision has no runover line.
Lines 8-9: Subdivision is in (3-5).

Line 10: Displayed expression is in cell 7.