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

Updated: 6-10-2023

This document contains information about revisions to the PDF and BRF files of An Introduction to Braille Mathematics Using UEB with Nemeth, A Course for Transcribers. Individuals who downloaded these files prior to the current upload dates should note this information about what has been changed or should download the most recent copy and discard the old one.

The updated lesson files can be located here:
https://nfb.org/programs-services/braille-certification/mathematics-braille-transcribing

Minor wording changes may not be noted, as well as minor changes to page number citations and entries in Table of Contents and the Index.

FRONT MATTER
10-23-22 Throughout (mostly): "don't" changed to "do not"
   Pages iv, vi: Text changed to say that exercises will be given to you from your grader.
   Pages vi, x: Foreword date changed to 2022
   Page ix: "Go back" changed to "Return"
   Contents: All EXERCISE entries have been removed from the contents list.
11-10-22 Contents, end of Lesson 1: "HOW TO PREPARE THE EXERCISES" and "EXERCISE 1" added.
11-22-22 Contents. new item: 2.21 Summary of Code Switching with Listed Items
Contents: 9.5 heading changed to "Barbed and Solid Arrowheads".
3-21-23 Table of Contents expanded to include subsections.
6-10-23 The Study Tips have been moved to the Preliminary Lesson.

PRELIMINARY LESSON
10-27-22 P5, "Symbol Recognition": The last phrase has been deleted.
   P8, "Symbol Recognition": The last phrase has been deleted.
   P13: The symbol for "American Mathematical Comma" has been removed. A comment is added to Example P-21.
   P14: The symbol for "American Decimal Point" has been removed. A comment is added to Example P-22.
11-17-22 Print copy: The size of the minus sign was standardized, throughout.
4-6-23 P13: Title changed; narrative and Example P-21 clarified.
   P14: Title changed; narrative clarified.
6-10-23 The Study Tips have been edited and moved from the front matter into this Preliminary Lesson.
LESSON 1

10-12-22  *Print copy:* Example 1-22, simbraille: Inserted a hyphen at the end of line 1.
10-15-22  Section 1.10: An exception was added.
          Section 1.11: New subitem c. and new Example 1-39. The remaining examples renumbered 1-40 through 1-46.
10-19-22  Comment to Example 1-11 changed to say "full cells of shadow dots".
10-22-22  1.7, narrative: redundant word "the" is deleted.
          1.8, narrative: "In print," is deleted.
          Example 1-33, comment: changed to say "in nonmathematical context".
          Example 1-35, comment: changed to say "in nonmathematical context".
10-27-22  Exercise Instructions and EXERCISE 1 have been added to the end of Lesson 1.
11-9-22   *Print copy:* Link to the Answers to Practice Material repaired.
          *Print copy:* Exercise 1: The length of the minus symbols is now consistent.
          Page 1-29, a new item (7) was added to HOW TO PREPARE THE EXERCISES regarding linage.
          There are now ten listed items.
11-17-22  *Print copy:* Links to Exercise 1 were added to the brief contents.
          *Print copy:* The size of the minus sign was standardized, throughout.
12-15-22  *Print copy:* Shadow dots have been added to blank lines in some of the examples.
          Exercise 1: The instructions have been rewritten. The first paragraph has been removed.
          Some of the items have been rearranged.
12-21-22  Example 1-16: Commentary revised.
          Exercise 1, item J: Paragraph heading changed.
2-16-23   Example 1-40: Comment added.
3-3-23    Instructions to Exercise 1: Clarification regarding placement of the Nemeth Code terminator following the 3-column list.
3-30-23   Braille copy: Some of the opening switches have been rearranged.
4-16-23   Example 1-9, comment: “decimal point” changed to “decimal numeration”
          Example 1-16, comment: extra “the” deleted
          Example 1-38 deleted. Further examples renumbered.
4-21-23   Example 1-45: Comment changed.
          Practice 1G: Instructions changed.
          Format Summary #1, Wording changes made in the last three paragraphs.
6-10-23   On the last page, before Exercise 1, the statement about the Study Tips reflects its new location at the end of the Preliminary Lesson.

LESSON 2

10-15-22  Sections 2.4 and 2.5: Narrative changed to clarify the rules regarding the use and nonuse of the punctuation indicator.
          *Print copy:* Example 2-16, simbraille: A decimal point was removed from line 2.
11-1-22   2.5: "in the box above" changed to "in the box on the previous page".
          Example 2-11: The comment has been rewritten.
          Example 2-12: The comment has been rewritten. A cross reference to Section 1.11 has been added.
          2.17: A reference to Example 2-32 has been added.
2.17.1: A new example has been added. Further examples are renumbered.
2.18.2: Paragraph heading changed to "An Itemized List of Mixed Items." Paragraph headings have been added to subparagraphs a-e.
Example 2-36: Item 3 has been shortened.

11-10-22 2.7: "mathematical symbol" changed to say "mathematical item"
2.18.1: Last sentence removed. Mental Math example moved to Lesson 4. Further examples renumbered.

11-17-22 *Print copy:* The size of the minus sign was standardized, throughout.
Example 2-42: Heading removed; comment rewritten.
New section 2.21 summarizes placement of code switches before and after a list.

11-28-22 Example 2-8: Division symbol changed to multiplication cross.
2.5.3: Clarification made regarding a negative number in quotes.

12-1-22 Practice 2B: Instructions regarding the placement of switch indicators has been changed.
The transcription shows the new layout.
2.21: The summary of the placement of code switches before and after a list has changed.

12-15-22 *Print file:* Shadow dots added to blank lines in some of the examples.
Instructions to Practice 2B changed slightly.
Section 2.21.1 has been rewritten.
*Braille file:* The instructions have been rewritten for Exercise 2.

3-3-23 2.8.2.b: Punctuation changed after second example.
Example 2-40: Typo corrected.
2.20: References to subdivisions deleted.

4-11-23 Example 2-42: Blank line inserted before item 1. Comment revised.

6-10-23 2.10.c changed to 2.10.1. Clarification added.
Example 2-18: Commentary changed.
2.13: “technical material” changed to “a Nemeth symbol”. Text added to 2.13.a.
2.14: Heading changed to “Paired Punctuation”. Narrative clarified.
2.17: Wording clarification.

**LESSON 3**

10-15-22 Section 3.1: An exception is added after the first paragraph.
Example 3-1: Spacing changed in print example. The comment is revised.
*Print copy:* Example 3-11, simbraille: Corrected misspelled word "variables".
Section 3.16: The order of the examples in this section is rearranged. Newly-numbered
Example 3-64 is expanded to illustrate the rule.

10-29-22 3.12.5: Text has been expanded regarding the transcription of chemical element symbols.

11-10-22 3.9 Text added to further define "unmodified" as it applies to an English letter.
New Example 3-52; further examples renumbered.
3.10.1: Parenthetical text moved from the end of this section.
3.12.4: This section has been deleted because the topic of plural, possessive, and ordinal endings with "single letters" is addressed in Lesson 4. Section 3.12.5 renumbered.
Example 3-65: A second sentence has been added. The commentary reflects the change.

11-17-22 *Print copy:* The size of the minus sign was standardized, throughout.
11-21-22  Examples 3-8 and 3-9 are now combined. A new Example 3-9 has been added. Sections 3.9 and 3.10 have been improved with clearer layout and discussion. Commentary is added to Examples 3-49 and 3-50. The order of Examples 3-51 and 3-52 has been reversed.

12-21-22  3.14: Narrative clarified.

12-28-22  Example 3-28: "or 315" deleted from the end of this sentence.

3-3-23    Practice 3E: Instructions added regarding placement of the Nemeth Code terminator.

3-3-23    Format Summary #2: Changes made to the first item regarding side-by-side itemized material.

4-13-23   3.6.2: Title changed; narrative expanded. Subitem a. added. New Example 3-30; further examples renumbered.

4-30-23   3.10.1.i: Changed to “transcribed in regular type”. The first footnote is deleted.

**LESSON 4**

10-16-22  *Print copy*: Practice 4F, item 5: italics removed from the word "or".

10-29-22  Example 4-41: The numeric indicators are removed; the comment is expanded. Examples 4-50 and 4-51 have been swapped and comments have been added. Practice 4I, item F: punctuation indicator removed; linage corrected.

11-10-22  4.26: Sentence added regarding placement of opening switch after a transcriber’s note.

11-11-22  4.27: New section added regarding embedded identifiers.

11-16-22  The final example was corrected to be number 4-66.

11-16-22  *Print copy*: The size of the minus sign was standardized, throughout.

11-22-22  Practice 4G: The items are now numbered. The answer to item 16 has been changed to YES.

12-22-22  Example 4-44: *Print copy*, *simbraille*: Letter "g" deleted from the end of line 4.

12-30-22  4.17.3: Text added regarding set notation. New example 4-42; further examples renumbered.

1-19-23   4.17.v: Clarification made regarding words in set notation.

4.17.3: Last sentence deleted.
Example 4-42 is now Example 4-45.

4.17.3.b: The paragraph has been replaced with new text. A new paragraph is inserted following Example 4-44, and Example 4-45 follows.

Example 4-45: Commentary added.

Practice 4G: Another item is added to the end of this list. The answer to #16 is changed.

Example 4-47: The wording is changed in the commentary.

3-15-23 4.25: General rule added regarding the blank line before a heading.
3-21-23 Example 4-3: meters and m changed to yards and yd.

Practice 4A: m changed to in.

4-30-23 4.1.3: New section about code switching and variables. New Example 4-4. Further examples renumbered.

4.20.1: Language changed to “abbreviated unit of measure”.

4.20.1.b: Sentence added to clarify the spacing rule.

**LESSON 5**

11-1-22 5.4 (table) and 5.4.1: "back slash" changed to "backslash"
Example 5-20: Nemeth Code terminator moved to precede the word "seconds".

5.4.9.e: Cross reference corrected to say 5.6.14.

Practice 5B, simbraille and braille copy: Column 1 should end in cell 22. Column 2 should begin in cell 25.

5.6.1 title changed to "Arc, Concave Downward"
5.6.2 title changed to "Arc, Concave Upward"

Example 5-31, simbraille: Now begins in cell 3; the word "be" is contracted.

5.10 symbols list: label to the fourth symbol changed to Negated "Bar Under Greater Than"

11-11-22 **Braille copy:** Braille page 65, Instructions for Exercise 5: The sentence about embedded identifiers was deleted.

11-17-22 5.4.9.e: Cross-reference changed to 5.6.12.
5.4.11.b: Cross-reference changed to 5.6.14.

5.6: The arc symbols have been removed from the comparison signs list. Subsections are renumbered to account for the elimination of 5.6.1 and 5.6.2.

12-15-22 **Print file:** Shadow dots added to blank lines in some of the examples.

Practice 5A: Placement of switches changed.

5.4: **Print file:** Second item in symbols table corrected to be dots (16).

Practice 5B, print file: Spacing corrected before the first symbol in column two.

Practice 5C: Items with arcs have been removed. Placement of switches changed.

Example 5-36: Transcription changed to reflect recommended placement of Nemeth Code terminator following an unitemized list.

12-19-22 **Braille file:** Instructions to Exercise 5 changed slightly.

12-28-22 Practice 5A: Instructions changed.

2-1-23 5.11: Typo corrected (begins for beings)

3-4-23 5.11: Narrative updated to current practice.

Practice 5F: Comment added.

3-30-23 5.2: Sentence added regarding keeping the components of these symbols undivided.

4-14-23 Example 5-12: Comment added.
Practice 5D, line 12, braille: “Union” capitalized to match print.

5-6-23 Example 5-27: comment added.
5.9.3 and Example 5-31 removed. Further examples renumbered.
5.11, last paragraph deleted

New 5.11.1 “Keep Together”; former 5.11.1 renumbered to 5.11.2.

**LESSON 6**

11-12-22 Example 6-21: Comment changed to "the plus sign".
*Braille copy:* Practice 6D, item (3) changed to two sentences.
6.7.1 and Example 6-26 comments: "parentheses" changed to "left and right parenthesis" and further text added.
6.16: "symbols braille" changed to "symbols in braille".
Practice 6L: "the" changed to "each"
Practice 6K: A period was added to the transcriber’s note.
*Print copy,* Answers to Practice Material: Practice 6C, Number 6.02 corrected; Practice 6D, Punctuation indicators inserted before each period.

12-8-22 *Print copy:* Shadow dots added to blank lines in the examples.
Practice 6B: Instructions changed. Placement of the blank lines in the transcription changed.

12-15-22 Practice 6J: Placement of the switch indicators has changed, as described in the instructions.

2-16-23 Practice 6C, item 4: *Print:* Quotation marks removed. *Simulated braille:* The number 6.02 corrected.
Practice 6K, item 3: *Braille:* A multipurpose indicator was inserted before the superscript 18.

3-31-23 Example 6-31: Commentary added.
Example 6-35: Commentary changed.
6.12.4: title changed, subsections rearranged, text and commentary clarified regarding ellipsis or long dash within a superscript or subscript.

New Example 6-39. Further examples renumbered.
6.12.5: Last sentence deleted. In the first sample, a space has been inserted before the baseline indicator.
Practice 6l, item 7: A space has been inserted before the subscript indicator that is associated with the ellipsis.
Practice 6J: Bold type changed to be centered headings.

Practice 6J, braille line 4, misformed aleph corrected.

**LESSON 7**

10-30-22 *Print copy:* Practice 7A, simbraille, lines 12-13: n > M was moved to line 13 to keep both switches on the same line as the math expression.

*Print copy:* Practice 7D, simbraille, lines 11-12: The opening switch and (a was moved to line 12 to keep the math expression and its code switch indicators on the same line.

11-4-22 7.1.1: A bulleted item was added regarding displayed material following a transcriber’s note. 
11-22-22 *Print copy:* The size of the minus sign was standardized, throughout.

*Print copy:* 7.7.1: The script 4 font has been corrected.
Practice 7H, item 1: boldface has been applied to the word "red" in the last sentence.
7.11.3: The note to students has been edited.
Example 7-37: Line numbers are added. The expression is now displayed and the period and ellipsis have been removed. The word "red" is colored red. The lines are numbered.
Commentary has been added.
Example 7-39: Line numbers are added. The comment is reworded.

12-16-22 *Print copy:* Typeform issues for bold and italic letters have been corrected in several places throughout this lesson.
Examples 7-1 and 7-2: Commentary clarified with cross-references to 7.1.1.
7.1.3: This section has been reorganized. Corrections are made to the examples and commentary includes cross-references to 7.1.1.
Practice 7A, *print copy simbraille:* "ence" is now contracted in "Sequences".
Practice 7E, *braille and simbraille:* The last two symbols on the fifth line are corrected to be gheh and Zheh. Also, the code switch indicators have been changed to the recommendation of being alone on the line before and after the list.
Practice 7F, *print copy,* line 5: A font discrepancy has been corrected. *Braille and simbraille:* The code switch indicators have been changed to the recommendation of being alone on the line before and after the list.
Practice 7H: The wording in the second paragraph is corrected to match the print.
Example 7-32, line 2 of the braille: Space inserted between the comma and the word “the”.
Example 7-33, line 3 of the braille: Space removed between “sum of A and -B" and the colon.
Practice 7J: The code switch indicators have been changed to the recommendation of being alone on the line before and after the list.
Practice 7L, *simbraille:* On line 3, a comma is added after the word “pairs”. *Braille and simbraille:* The first expression and the word "and" fits on line 7.

2-1-23 7.2.2: Text change to state that a Transcriber’s Notes page is required. The transcriber’s note has been changed to match the one given in Practice 7D.

2-16-23 7.1.1: Rewritten to clarify placement of switch indicators with displayed math expressions.
Practice 7B, item 2: code switches changed in the displayed material; commentary added.
Example 7-7: Lines 2-4 changed to illustrate Nemeth continuing after the displayed expression. Commentary added.
7.2.1: Rewritten to follow established guidelines for code switching before itemized math.
Example 7-11: Only one transcription is retained.
Practice 7D: Commentary to line 14 rewritten.
Practice 7I, *print:* In item (1), the plus signs were changed to regular type. Comment added.
Example 7-37: Lines 5-6 edited according to code switching guidelines after a transcriber’s note. Commentary adjusted.

4-2-23 7.1: Note added.
7.1.1.a and b: Text clarified.
Example 7-2: Slight changes.
7.5, symbols list: “San Serif” changed to “Sans Serif”. Note moved up from subsection a.
7.5.a: Order of indicators clarified.
Practice 7E: Instructions and sample changed to show the opening switch on a line by itself.
Practice 7F, last line, braille: Symbols corrected to capital Delta and sans serif letter d.
Practice 7J: Instructions corrected to match recommended format given in Lesson 2.

7.6.2.a  Slight wording change for clarification. Subsection c. added.
7.6.2.a, third sample, Print copy: letter p is bold.
Example 7-27, Print copy: word changed to match the braille.
Example 7-36, Print copy: period added to the end of the sentence.

LESSON 8

12-6-22 Print copy: The size of the minus sign was standardized, throughout.
8.5: The narrative has been changed to match that of the new code book.
8.5.1.a "Linear Print Representation of a Mixed Number" has been removed from the code
and so has been deleted from this lesson. The text from subsection b. has been moved
to the main part of 8.5.1.
8.5.3: The narrative and the two examples have been changed to match that of the new
code book.

12-29-22 Practice 8D: Code switch indicators moved.

1-19-23 Example 8-33, Print copy: Identifier "1." added.
Example 8-36, line 7: Nemeth Code terminator deleted.
Example 8-41, Print copy: Multiplication dots inserted in denominators.
Example 8-42, Print copy: Multiplication dots inserted in denominators.

1-31-23 Print copy: Date in footer corrected.

LESSON 9

12-18-22 Print copy: The size of the minus sign was standardized, throughout.
9.5: Heading changed to "Barbed and Solid Arrowheads". Solid arrowheads added to the
table. Names of arrowheads updated. Other small changes made to this section.
Practice 9B: Placement of switch indicators and blank lines changed to comply with new
guidelines.

Example 9-60: Opening switch moved to cell 3; commentary adjusted.

1-20-23 Braille copy: Instructions to Exercise 9 have been changed.

2-7-23 9.18 and Example 9-20: Clarification regarding margins for side-by-side layout.
Braille copy: The instructions for EXERCISE 9 regarding side-by-side layout were updated.

2-17-23 Examples 9-34 and 9-35: Commentary added.
Example 9-54: Braille/simbraille changed to start out in UEB.
9.29: Sentence regarding headings added to subitem i; cross reference removed from
subitem v.
9.30: Cross reference removed from subitem v.

2-28-23 9.8, Table of symbols: Simbraille for the third arrow left column corrected.
9.17.2: "currency" changed to to "monetary" throughout.
9.17.2.b: Narrative adjusted to obey a rule change.
Examples 9-18 and 9-19: Changed to obey the rule change.
Example 9-25: Correction made to the first problem; commentary added.
Section 9.25, second paragraph: Clarification added regarding items below the separation line.
Examples 9-57, 9-59, 9-60, and 9-63: Commentary added.
Section 9.31 divided into two sections.

3-4-23  
*Braille copy:* Last item in the instructions for Exercise 9 changed.

3-7-23  
Section 9.22 and 9.22.1 rewritten.

3-9-23  
*Print copy,* Example 9-9: separation line corrected.

4-3-23  
Section 9.22 further clarified.
Example 9-37, print: Final mixed number corrected.

5-23-23  
9.8: Last sentence changed regarding number lines.
9.13: “Cartesian graphs” added to the list at the end of the paragraph.
Much has changed after Section 9.18. Significant changes have been made regarding margins for displayed side-by-side spatial problems. Examples are renumbered after Example 9-21.

5-24-23  
*Braille file:* Instructions to Exercise 7 changed.

5-27-23  
9.19: Deleted “an ellipsis” from the first sentence.
Example 9-24: The omission in the second problem is now printed as a question mark. The comment is changed.

**LESSON 10**

12-29-22  
*Print copy:* The size of the minus sign was standardized, throughout.

1-20-23  
*Braille copy:* Additional note added to the instructions to Exercise 10.

2-19-23  
Example 10-18: Commentary edited.
Example 10-25: Line numbers and commentary added.
Example 10-26: Line numbers and commentary added.
Practice 10D: The side-by-side arrangements moved to the left two cells. Comment added.

3-17-23  
10.6: Clarification added.
Practice 10B: Instructions The first problem has been changed.
Example 10-22, simbraille: full cell corrected to be a minus symbol.
Practice 10D: Instructions changed. In the simbraille, “six” changed to “seven” on line 1; colon changed to period on line 7; fourth problem moved up to lines 9-11; last problem moved up to lines 13-16. Commentary adjusted.

3-23-23  
Example 10-22: Division symbol corrected.
Example 10-24, print copy: Extra braille number 3 deleted in the divisor.
Example 10-27, print copy: Missing braille separation line inserted.
Example 10-35: Missing quotients inserted.

5-7-23  
*Braille file:* New sentence added to the instructions for Exercise 10.

5-26-23  
Practice 10D: Instructions changed. *Braille:* The displayed spatial problems begin in cell 3.

6-3-23  
10.15.b, sample, first line, print file: moved the 2 to the right one cell.
Example 10-33: Several corrections made.

**LESSON 11**

12-18-22  
*Print copy:* The size of the minus sign was standardized, throughout.
11.6: A sentence has been added following the filled-in square.
Practice 11A: Transcriber's note changed to match the model given in 11.4.1. Commentary deleted.
Example 11-22: Text added for clarification.
Example 11-26, commentary: Changed "back slash" to "backslash"
11.36.2.a: Renumbered to be 11.36.3, and labeled "Significant Typeform Applied to a Fraction or a Mathematical Symbol"

2-19-23 Example 11-1: Comment revised.
Example 11-3: Comment added.
Example 11-26, braille and simbraille: comma added to match print.
3-21-23 11.13: numeric indicator inserted before numeral 30 in sample of interior angle.
11.24.1.d: terminator symbol added to the end of the right arrow keystroke.
Example 11-20, print: second "Z" made bold.
4-11-23 Example 11-9, print copy: deleted the first “and”.
Example 11-10, print copy: “F1” image corrected.
Example 11-25: Rewritten.
5-2-23 Example 11-1: Shading has been erased from the first octagon shape; in the comment, emphasis has been applied to the title Guidelines and Standards for Tactile Graphics.
11.6: Clarification added regarding filled-in and shaded shapes. New Example 11-5. Further examples renumbered.
11.3.1, 11.4.1, 11.10: Appendix B of the Nemeth Code changed to Appendix D of The Nemeth Braille Code for Mathematics and Science Notation.
11.26: Clarification regarding transcriber’s note.
Example 11-22: Comment added.
11.36.1.a: Rewritten; second example changed to include the word “not”. Comments added. Postscript added to the end of the lesson regarding probability notation. 
Braille file: Instructions to Exercise 11 changed slightly.

LESSON 12

12-19-22 Print copy: The size of the minus sign was standardized, throughout.
12.16.2: Paragraph added following the boxed symbol.
Example 12-21: Comment deleted.
2-1-23 A second paragraph was added to the Lesson Preview.
Some modifiers were enlarged for clarification.
Paragraph before Example 12-20: A note was added about the lack of code switch indicators.
12.12, table: Extra line deleted under "Hollow Dot Over Equals Sign"
2-15-23 Practice 12C: Code switching repaired on line 6. An alternate transcription of item 3 is given.
2-19-23 Practice 12D, braille and simbraille: Opening Nemeth Code indicator moved to the end of line 4 and deleted from the beginning of line 5.
Practice 12G: Comment added.
4-4-23 12.3.3 and Example 12-3 clarified and expanded.
Example 12-10 (print): Items in Arabic column changed to be aligned by place value; items in Roman column changed to be centered.
Example 12-22, Statement 2 (braille): semicolon changed to a comma
Practice 12J, Step 1 (print): minus symbol changed to equals sign.

Braille file: Instructions for Exercise 12 changed.

12.3.3: Heading changed to “Arrows Used in Vector Notation”.
12.3.3.a and Example 12-4 deleted. Further examples renumbered.
12.6.2, note to first sample: "4" changed to "6"
Example 12-14 (formerly 12-15): Braille format changed to a nested linked expression.
12.7: Correction made to the print image of the Sigma sample.
Postscript added regarding various types of vector notation.

LESSON 13

Print copy: The size of the minus sign was standardized, throughout.
13.1.5: Only the slanted line through the empty set symbol is now in the code.
Practice 13A: Placement of code switch indicators has been changed.
13.10.1: Mention of icons deleted. Second paragraph moved and changed.

2-19-23 Print copy, Practice 13B, line 5, simbraille: Nemeth Code terminator deleted.
4-30-23 13.1.3, second chevron, print copy: n corrected to be in the superscript position.
Practice 13A, print copy: typeform correction in the 4th item, subscript level correction in the 13th item.

Print copy Example 13-6: two symbols corrected.
Print copy Example 13-7: subscript level corrected.

LESSON 14

Renumbered Example 14-16, lines 2 and 3, braille: Space inserted following each function, before each x. Parentheses removed.
1-9-23 14.2.2: Narrative clarified. Comment to the first sample changed.
Example 14-13: Variable changed to beta.
14.3.4: Sample changed to include parentheses. Comment added.

4-4-23 Practice 14E: Commentary added to the transcription.
Example 14-20: Comment added.
Practice 14H: Commentary added to the transcription.

4-25-23 14.2.1 and 14.2.2: Language clarified.
14.2.2: A sample has been added. Comment moved to Example 14-3.
Examples 14-5, 14-7,14-8: Comment reworded.
Example 14-9: First word removed.
Practice 14A: The space before cos corrected to be a baseline indicator.
14.3-14.8: The word “abbreviated” has been deleted throughout most of these sections.
Practice 14B, simbraille: Item (1) deleted; remaining items renumbered (1)-(7)
14.3.b: A sample has been added.
14.4: A sample has been added.
14.7: Comment clarified.
Example 14-21: Several alignment corrections have been made.
Example 14-22: Alignment corrections have been made in the print image.
Example 14-23: Unnecessary spaces deleted from one of the columns in the braille transcription.

**LESSON 15**

12-29-22  *Print copy*: The size of the minus sign was standardized, throughout.
Practice 15D, *braille*: Nemeth Code terminator inserted at the end.
4-4-23  15.2.1: Heading added.
5-10-23  Practice 15B: Sommer’s routine changed to item D. Braille errors in the math portion corrected.
Practice 15E, *braille* lines 7 and 8: Two closing fraction indicators inserted.
Example 15-36, *braille* line 2: Dot 5 inserted before the modified Sigma notation

**LESSON 16**

12-29-22  *Print copy*: The size of the minus sign was standardized, throughout.
Practice 16G: Instructions added.
Example 16-21: The last expression is moved to start on line 13 with its opening Nemeth Code indicator.
1-27-23  16.14: A sentence was added about placement of the key.
4-4-23  16.6.1: Added the word “given”.
Example 16-17: Comments expanded.
5-26-23  Practice 16C, *print copy*: minus sign changed to equals sign.
16.6.2: Some of the comments have been clarified.
Practice 16D: “m” is no longer cancelled; × 1 added to last numerator and “m” moved to the numerator. “100” is now canceled in the second link.
Example 16-21: Comment to lines 1-2 corrected to (3-1).
*Braille copy*: The instructions to Exercise 16 have been clarified.

**LESSON 17**

12-24-22  17.10: This entire section has been updated to follow the new rules.
17.17: Last sentence deleted.
17.17.1: Text updated.
17.17.3: Only the preferred method is retained.
Examples 17-34 and 17-35: Commentary expanded.
Example 17-31: Comment added regarding margins.
4-4-23  Example 17-22 Clarified; commentary edited.
Example 17-34: Item number changed to “8”.
5-26-23  Miscellaneous typos corrected throughout.
Practice 17E: Margin changed to cell 1.
Practice 17F, braille: line 6: fraction corrected to 3/4; item 5: word “the” deleted to match the print copy.
Practice 17G, braille: last line of item 1 and item 2: baseline indicator inserted before the right enlarged grouping symbol.

LESSON 18

10-17-22  Examples 18-8b, 18-13, 18-14: Spacing corrected to assure at least two blank cells between columns.
18.6.3.a Space-Saving Alternative: This section has been deleted.

10-21-22  Braille copy: Instructions for item (2) in Exercise 18 were changed.
10-22-22  Example 18-17: Ellipsis deleted.
12-9-22   Braille copy: The instructions for Exercise 18 were changed slightly.
12-28-22  Print copy: The size of the minus sign was standardized, throughout.
18.1: A second paragraph has been added.
Example 18-9b: Commentary revised.
Practice 18A: Instructions revised.
Examples 18-14 and 18-15: Numbers changed to be right-adjusted.
Example 18-16, alternate transcription: A blank line was inserted before the closing switch.
Braille copy: Instructions to Exercise 18 changed.

4-4-23    Example 18-7, braille: Numerals aligned as printed.
18.10: Narrative expanded.

5-19-23   Example. 18-21 and 18-23: Comment added regarding placement of displayed diagrams.
Practice 18E moved to follow Example 18-23.
Section 18.10 expanded to show examples of number lines, including a new Practice 18F.
Further examples and practices relabeled.
Braille file: Instructions for Exercise 18 changed.

FINAL LESSON

11-11-22  Print copy: The size of the minus sign was standardized, throughout.
12-29-22  Practice C, second page of braille/simbraille: The opening switch is moved to end line 2 and deleted from line 3; Commentary added regarding line 2. The word "What" changed to "Which" on line 7.

4-4-23    Practice D, page a92, line 20: The Nemeth Code terminator moved to cell 1.

APPENDIX A

12-29-22  Print copy: The size of the minus sign was standardized, throughout.
6-3-23     Lesson 10, print image (page A–16): Alignment of the multiplicand has been corrected.

APPENDIX B

12-28-22  Print copy: The size of the minus sign was standardized, throughout.
APPENDIX C

1-28-23  The section on Placement of Code Switch Indicators was revised, most significantly in the section regarding Itemized Material.

3-11-23  Page C-11: Paragraph rewritten under “Switch Indicators with Displayed Mathematical Material”.

             Improvements made to the narrative throughout.

4-11-23  Narrative edited on page C-11: Unitemized Spatial Arrangements. Page C-12: Switch Indicators after a Heading (deleted reference to 4.25.2); Switch Indicators and Transcriber’s Notes; Switch Indicators with Boxed Material.

5-27-23  Page C-5: Exercise Set: A paragraph was added regarding instructions. Instructions: The pagination guidelines were deleted and a cross reference added.