

LESSON 3

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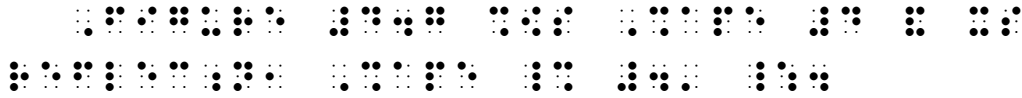
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LESSON PREVIEW

Transcription of words in mathematical context requires a close look at punctuation, capitalization, and nonuse of contractions. Abbreviations require special treatment. A single narrative word may be transcribed within the code switches by using a single-word switch indicator. Code switching at page turns is examined. "Single letters" in Nemeth are defined, and the English-letter indicator is introduced.

Example 3-4

Figure 4.7 shows Shape 4 and its reflection, Shape 4'.

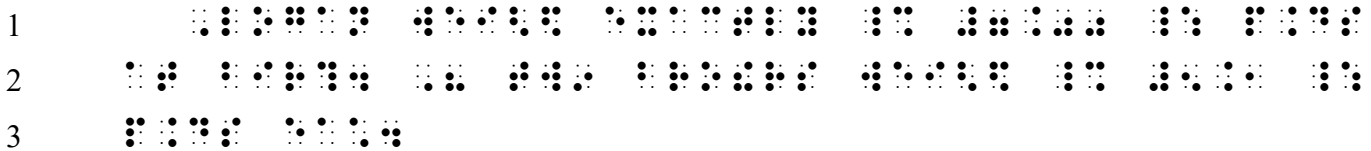


The only item which requires a switch to Nemeth is the number with the prime sign. The word "Shape" is transcribed in UEB.

- a. **Linage.** The word and its associated expression may fall on separate braille lines with the line wrapping at the space between them. (Note that this rule differs from an *abbreviation* associated with a Nemeth expression which will be discussed in [Section 3.4](#).)

Example 3-5

Logan weighed exactly 7.00 pounds at birth. His twin brothers weighed 5.1 pounds each.



*Lines 1 and 2: Only the decimal numbers are inside the switches.
Lines 2-3: The number need not appear on the same line with its associated word "pounds".*

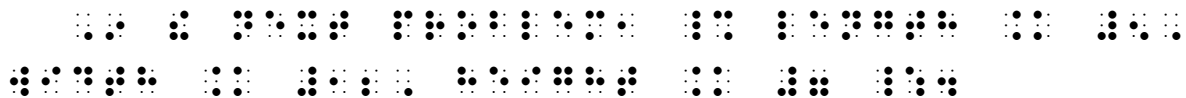
- 3.1.2 **Spoken Math.** When words are used to replace math symbols such as "plus", "equals", etc., they are transcribed in UEB. See Examples [3-15](#), [3-29](#), [3-60](#), [3-67](#), [3-72](#), and [3-78](#).

3.2 Words in Mathematical Context

When words are part of a math expression the words are included in the technical notation—that is, the whole expression is placed inside the Nemeth switches. No contractions are used within Nemeth switches. Spacing rules of the Nemeth Code are followed.

Example 3-6

In the next problem, length = 5, width = 12, height = 7.



The words "length" "width" and "height" are part of the equalities. Inside the switches, words are transcribed without contractions.

In [Example 3-7](#), words are substituted for values in a formula. The division symbol is unspaced from the words according to Nemeth rules for spacing of operation signs.

PRACTICE 3A

- A. If 1 pound of Swiss cheese costs \$2.50, how much does 4.8 pounds cost?
 - B. JMHS's set of high-jump champions: {Terry, Leslie, Traci}
 - C. The parts of a subtraction problem are named as follows: minuend – subtrahend = difference.
 - D. Did you know that 98.6 degrees Fahrenheit is not necessarily "normal" body temperature for everyone?
-

Introduction to Abbreviations

3.4 Abbreviations

An abbreviation by itself is not mathematical and does not require a switch to Nemeth. However, when the value requires Nemeth, both the value and the abbreviation are placed inside the Nemeth switches.

➤ 1.5 min ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠

No contractions are used in Nemeth.

The same rule applies to a two-part abbreviation, as well as a two-part unit when one part is a whole word and the other part is an abbreviation.

➤ 4.5 sq. in. ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠

➤ 4.5 sq. inches ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Example 3-11

SAS means "side angle side".

⠠⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Even though SAS is a special abbreviation in the field of mathematics, as used in this example it is simply an abbreviation in the narrative and is transcribed in UEB.

Example 3-12

In hours, how long is the 8 a.m.-3 p.m. school day?

⠠⠠⠠ ⠠⠠⠠⠠⠠⠠ ⠠⠠⠠ ⠠⠠⠠⠠ ⠠⠠⠠ ⠠⠠ ⠠⠠⠠ ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠
⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠

A freestanding unmodified numeral and any associated abbreviation does not require a code switch.

Example 3-13

15 mm can be expressed as 1.5 cm.

⠠⠠⠠⠠ ⠠⠠⠠ ⠠ ⠠ ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠ ⠠⠠ ⠠⠠⠠ ⠠⠠⠠⠠⠠ ⠠⠠⠠ ⠠⠠⠠⠠

The abbreviation cm applies to the number 1.5 and so the abbreviation is included in the switches.

» 4.72 min. = 283.2 sec.

Example 3-17

Converting minutes to seconds, 4.72 min. = 283.2 sec.

- a. **Abbreviations with a Related Period.** Examine the surrounding material to determine if the abbreviations include a period. If they do, the abbreviation must not be separated from its related period. If a Nemeth Code terminator follows the abbreviation, the period that belongs to the abbreviation is placed before the terminator, unspaced from its abbreviation.

If a period functions both with an abbreviation and as punctuation at the end of a sentence, keep the period with its abbreviation.

In an isolated problem where there are no context clues to determine whether a period applies to the abbreviation or merely ends the sentence, assume that it applies to the abbreviation.

Example 3-18

1 metric kilogram is equivalent to 2.20 lb., which can also be written as 2 lb. 3.274 oz.

The comma is part of the sentence structure and so is placed after the Nemeth Code terminator. Although 2 lb. by itself does not require a switch, because it is part of a measurement that contains a decimal, the entire weight is transcribed in Nemeth to maintain continuity.

Example 3-19

The baby elephant weighed in at 197.28 lb. Convert to kilograms.

The period after lb is treated as if it belongs to the abbreviation because there are no context clues regarding the function of the period.

Example 3-24

15.34 fl.oz. of water weighs 1 lb.

In print, there is no space between fl. and oz. Note that the number 1 is on the same line as its related abbreviation (lb.) even though the number would fit on the previous line. See [Section 3.4.1](#).

3.4.4 Spacing of Omission Symbols with Abbreviations. When a sign of omission represents an abbreviation, or a missing item next to an abbreviation, the omission symbol is spaced according to the spacing rules for abbreviations. Spacing in the print copy often does not follow this design and must be disregarded when applying spacing to the braille transcription.

Example 3-25

Fill in the blank: 3gal.5qt. = 4___1qt.

In print, the abbreviations and the low line which represents an abbreviation are unspaced.

Example 3-26

Plus or minus? 14 cm _?_ 12 cm = 2 cm

This omission represents an operation sign. It is preceded by a space because the abbreviation which precedes it must be spaced.

3.5 Numbers with Ordinal Endings

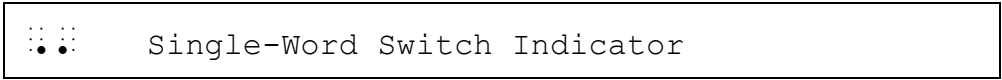
Ordinal endings are not abbreviations. Recall from Lesson 1 that a numeral with an ordinal ending is transcribed in UEB if it occurs in literary context. If the ordinal appears in mathematical context, the ordinal ending becomes part of the expression and is punctuated mathematically.

More To Come This does not complete the discussion of abbreviations in mathematical context. Single-letter abbreviations, abbreviations that use the same letters as a shortform, and further spacing rules within mathematical expressions will be discussed in Lesson 4.

Single-Word Switch Indicator

3.7 The Single-Word Switch Indicator

Words that do not provide mathematical meaning are transcribed in UEB. When a single word occurs between two math expressions, the single-word switch indicator is used to indicate that the following word is in UEB.

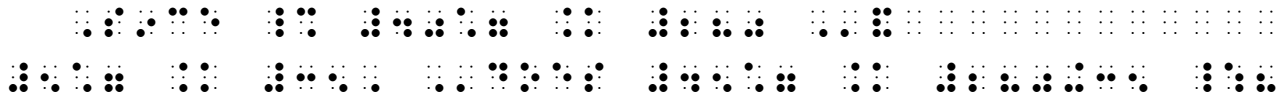


Until this symbol becomes widely recognized, we suggest that the single-word switch indicator be listed on the Special Symbols page. See the Final Lesson for details.

3.7.1 Spacing and Contractions. The single-word switch indicator is unspaced from the word. Contractions are used according to the rules of UEB. The switch is required on a single word even if the word contains no contractions. The effect of the single-word switch indicator is terminated by a space, and Nemeth resumes.

Example 3-30

Since $40 \cdot 7 = 280$ and $5 \cdot 7 = 35$, does $45 \cdot 7 = 280 + 35$?

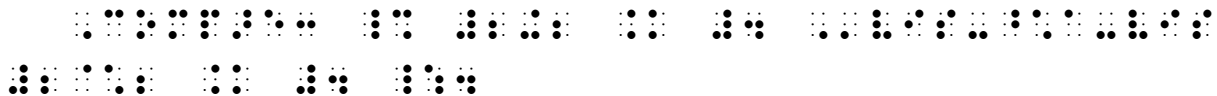


The words are part of the sentence structure—they are not being used mathematically—and so UEB applies.

3.7.2 With a Hyphenated Compound Word. The single-word switch indicator can be used with a hyphenated compound UEB word that comes between Nemeth items.

Example 3-31

Compare: $2 + 2 = 4$ vis-à-vis $2 \times 2 = 4$.

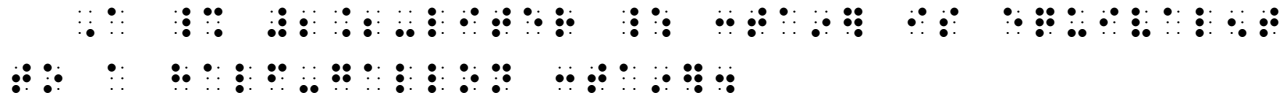


The hyphenated compound word vis-à-vis is considered to be one word. The acute accent follows UEB rules for modified letters.

- a. When a Nemeth item and a UEB word are part of a hyphenated expression, the entire expression is transcribed in Nemeth. The single-word switch indicator is not used.

Example 3-32

A 2.2-liter container is equivalent to a half-gallon container.

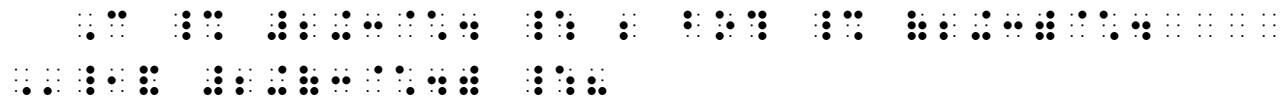


The first hyphenated expression contains a decimal number and so a switch to Nemeth is required. The word "liter" is included within the switches and is transcribed without contractions.

- 3.7.3 **With Typeform.** The single-word switch indicator can be used with a word associated with a UEB typeform word indicator.

Example 3-33

Can $2 + 3 \times 4$ be both $(2 + 3) \times 4$ and $2 + (3 \times 4)$?



The single-word switch indicator is used on the underlined word and.

- 3.7.4 **With Lower Wordsigns.** A lower wordsign may be used with a single-word switch indicator without violating the lower sign rule.

Example 3-34

Let $2 + 3 \times 4$ be $2 + (3 \times 4)$.



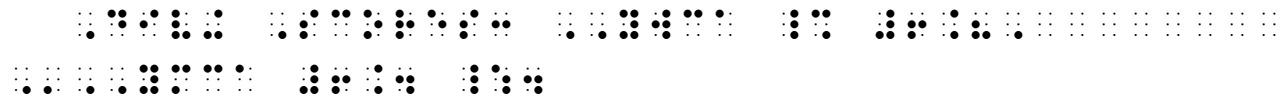
The single-word switch indicator is used on the lower wordsign for be.

- 3.7.5 **With a Heading.** The single-word switch indicator can be used with a one-word heading that comes between Nemeth material.

- 3.7.6 **With Abbreviations.** A single-word switch may be used for an abbreviation. But remember, an abbreviation of measurement associated with a Nemeth number is part of the Nemeth expression.

Example 3-35

Diving Scores: YWCA 6.8, YMCA 6.4.



Example 3-39

The problem has two solutions: +5 and -5 (because $5 \times 5 = 25$ and $-5 \times -5 = 25$).
What is another way to write +5 and -5?

1 ⠠⠨⠨ ⠠⠲⠢⠠⠨⠨ ⠠⠵⠨⠨ ⠠⠭⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠵⠨⠨ ⠠⠮⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

2 ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

3 ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

4 ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

*Lines 2 and 3: The opening and closing parentheses are in the same code: Nemeth.
Line 2: The single-word switch indicator immediately follows the opening parenthesis.*

Example 3-40

The problem has two solutions: ± 5 (because 5×5 and -5×-5 both equal 25).

Transcription A.

⠠⠨⠨ ⠠⠲⠢⠠⠨⠨ ⠠⠵⠨⠨ ⠠⠭⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠵⠨⠨ ⠠⠮⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

The closing parenthesis is in UEB. The opening parenthesis must also be in UEB. Because a single-word switch indicator cannot be used immediately before an opening parenthesis, Nemeth is terminated and then reopened after the word.

Transcription B.

⠠⠨⠨ ⠠⠲⠢⠠⠨⠨ ⠠⠵⠨⠨ ⠠⠭⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠵⠨⠨ ⠠⠮⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

⠠⠨⠨ ⠠⠨⠨⠨⠨ ⠠⠨⠨⠨⠨

By transcribing the numeral 25 and the closing parenthesis in Nemeth, the opening parenthesis is now done in Nemeth, similar to [Example 3-39](#).

3.7.9 **The Word "of".** The word "of" requires a closer look. Within a narrative sentence, it is a word like any other word and may require a single-word switch indicator. However, when "of" is part of an equality or an equation, it is transcribed in Nemeth, uncontracted, without any code switching. Compare the treatment of the word "of" in [Examples 3-41](#), [3-42](#), and [3-43](#).

3.9 New Print Page

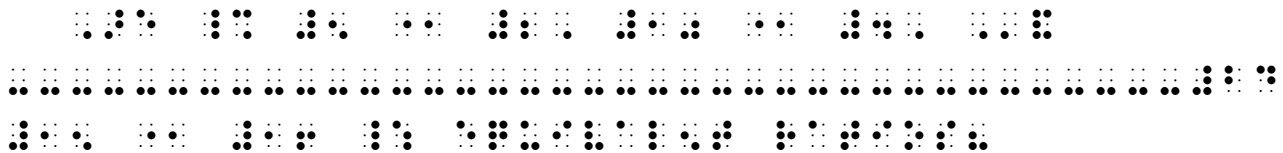
The page change indicator and page number are constructed in the same way in either code. The code in place before the page change indicator remains in effect following the page change indicator. Placement of code switch indicators is not affected by the presence of a page change indicator.

Example 3-51

Are 5 : 2, 10 : 4, and

[print page turn, page 24]

15 : 16 equivalent ratios?



Nemeth remains in effect through the page change indicator.

LETTERS

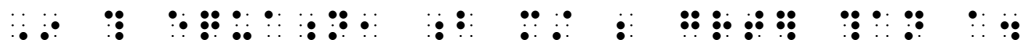
3.10 Single English Letters in Narrative

The language of mathematics uses single letters as mathematical characters. Special provision is made for a single English letter that has mathematical meaning when it appears within UEB narrative.

The rules are similar to those you have learned about freestanding, unmodified numbers within narrative: when an English letter is freestanding and is unmodified, it may be transcribed in UEB. As with numbers, an unmodified English letter that touches literary punctuation is considered to be freestanding. In a hyphenated term such as "x-axis", the letter is considered to be unmodified. An English letter with an ordinal or with a plural ending is considered to be unmodified. Roman numerals are also included in this definition and will be studied in Lesson 4.

Example 3-52

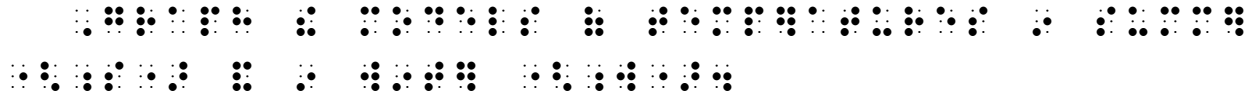
In this equation, b must be greater than a.



The unmodified letter a, transcribed in UEB, is touching punctuation.

Example 3-53

Graph the models of temperatures in summer (s) and in winter (w).



The unmodified letters s and w, transcribed in UEB, are touching punctuation.

Example 3-54

The dependent variables belong on the y-axis.



The letter y is unmodified. The hyphenated term is transcribed in UEB.

Example 3-55

Find the nth term of the arithmetic sequence.



The letter n is unmodified. The ordinal is transcribed in UEB.

3.11 Single English Letters in Nemeth Code

When an English letter that has mathematical meaning appears in technical context—that is, between Nemeth switches—it is transcribed according to the rules of the Nemeth Code. Before presenting the rules, it is helpful to understand how the Nemeth Code defines a "single letter".

3.11.1 **Nemeth Definition of "Single Letter"**. Throughout this course, when referring to the Nemeth Code's definition of a single letter, the term "single letter" is in quotation marks. To be defined as a "single letter" in Nemeth, several criteria must be met.

- i. A "single letter" must be from the English alphabet, transcribed in regular type, and unmodified as defined in [Section 3.10](#).

These are "single letters" p D z R

These are not "single letters" π **D** \bar{z} ℝ

The first letter is not from the English alphabet, the second and fourth letters are not in regular type, the third letter is modified with a bar over it.

- ii. Furthermore, in the print copy the letter must be both preceded by a space or by one or more punctuation marks and followed by a space or by one or more punctuation marks.*

These are "single letters" "y" x, "w S"

Each letter is preceded and followed by punctuation or by a space.

These are not "single letters" -x "wS" y+z

The x, z, and S are not preceded by a space or by punctuation (-x is "negative x"); the y and the w are not followed by a space or by punctuation.

- iii. Whether the leading punctuation mark is preceded by a space or not is irrelevant; whether the following punctuation mark is followed by a space or not is irrelevant.

These are "single letters" "x"+"y"

Each letter is both preceded and followed by punctuation.

- iv. If the space shown in print is not shown in braille, the letter is no longer a "single letter."

These are not "single letters" r + s

Although each letter is preceded and followed by a space in print, in braille the plus sign is unspaced from the letters.

- v. And finally, to be defined as a "single letter" the letter must not be an abbreviation nor can it be a word ("a", "A", "I", or "O").

These are not "single letters" I need 4.5 m of fabric.

I is a word; m is an abbreviation for meters.

*Nemeth grouping symbols, such as parentheses, are not considered to be punctuation marks. Rules for letters touching grouping symbols will be discussed in Lesson 4.

3.14 Letters as Identifiers

Letters used as identifiers are constructed according to the rules of the code which is in effect at the time—UEB or Nemeth. Compare:

Print	UEB	Nemeth
a.	⠠⠁	⠠⠁⠠⠠⠠⠠
B.	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠⠠
(a)	⠠⠠⠠⠠⠠⠠	⠠⠠⠠
(B)	⠠⠠⠠⠠⠠⠠⠠⠠	⠠⠠⠠⠠
c)	⠠⠠⠠⠠	⠠⠠⠠

Instructions: Demonstrate the use and the nonuse of the English-letter indicator for "single letters" by transcribing this practice entirely in Nemeth. Place the opening Nemeth Code indicator in cell 1 on the first line. Begin item (a) on the next line. Place the Nemeth Code terminator at the end of the last item, on the same line.

PRACTICE 3E

- (a) $r = \text{rate}$
- (b) $"r" = \text{rate}$
- (c) $x, y, z < 100$
- (d) $n\text{¢} = \$4.95$
- (e) $x > "3"$
- (f) $a + b$
- (g) $|y| = |-y|$
- (h) $|x + y| = |x| + |y|$
- (i) $P(\text{red and blue})$

3.16 Capitalized Letter Sequence

Each capitalized letter in a mathematical sequence of letters must be capitalized individually.

➤ PQRS ⠠⠠⠠⠠⠠⠠⠠

Example 3-70

Prove PQRS is a rhombus.

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

3.17 Shortform Letter Combinations

Because contractions are not used in Nemeth, a mathematical sequence that corresponds to a shortform of UEB will not be read as a word when it occurs between the switches. No English-letter indicator is needed.

Example 3-71

If a = c = d, then ac = cd.

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Example 3-72

Wd means "W times d".

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Example 3-73

Mark the abth and jkth columns.

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Example 3-74

What is angle acr + angle rcb?

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Example 3-75

$3g \times 3r \times 3t = 27grt.$

⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Instructions: Explain your decisions regarding use and nonuse of the English-letter indicator.

PRACTICE 3F

- (A) Prove: If $a < b$ and $c < 0$, then $ac > bc$. Verify your proof by determining ac and bc when $a = 5$, $b = 7$, and $c = -4$.
- (B) $j = 1, 2, \dots, n$
- (C) 40% of $N = 120$
- (D) 40% of "N" = 120
- (E) If "rcv = rjc" does "v" = "j"?

FORMAT SUMMARY #2

Here is a summary of the Nemeth formats encountered in Lessons 2 and 3.

Side-by-Side Itemized Material When itemized material is arranged side by side across the page in print, the braille format is changed so that all identifiers start in cell 1. (Different rules apply to subdivisions, to embedded identifiers, and to spatial material which will be studied later.)

Keep Together—Hyphenated Expressions A hyphenated expression containing one or more mathematical components must not be divided between braille lines.

Keep Together—Mathematical Expression If a page number on line 25 or line 1 does not allow the entire mathematical expression to fit on the line, the expression must be brought down to the next line that has enough usable cells. If the expression will fit on one line but the code switch indicators will not, one or both of the indicators can be placed on a different line.

Keep Together—Abbreviation An abbreviation and a preceding or following numeral to which it applies must not be divided between braille lines.

For further practice, see Addendum 1—Reading Practice.

Submit Exercise 3 to your instructor.

PRACTICE 3B

1 ⠠⠑ ⠠⠃⠗ ⠠⠁ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

2 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

3 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

4 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

5 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

6 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

7 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

8 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

9 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

10 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

11 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

12 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

13 ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗ ⠠⠑ ⠠⠃⠗

- Line 3: A number and a related abbreviation (2.5 lbs.) must not be separated between lines.*
- Line 4: Reminder: The grave accent would be listed on the Special Symbols page of a transcription containing the modified UEB letter e in Gruyère. See Appendix G of Braille Formats.*
- Lines 4 and 6: A space is inserted before the abbreviation kg even though there is no space in print.*
- Line 5: The European decimal point is transcribed as dot 6.*
- Lines 8 and 9: Care is taken to ensure that each equality is not divided between braille lines.*
- Line 8: The ordinals are punctuated mathematically within the code switches.*
- Line 11: The spacing of ft.lb. matches print spacing (unspaced).*
- Line 13: The word "knots" is not included inside the Nemeth switches. (See [Section 3.2](#))*

