Key Points Lesson 15

Lessons 1 through 14 introduced you to Unified English Braille (UEB) that is used when writing in a literary context. This lesson provides a brief introduction to two ways to write mathematics material; one is using the UEB code and the other is using the Nemeth code. In the United States, as of January 4, 2016, both codes are being used.

In Lesson 4 you learned the numbers in Unified English Braille. To braille numbers you place the numeric indicator (⠼) in front of the first 10 letters of the alphabet.

⠼⠁ ⠼⠃ ⠼⠉ ⠼⠙ ⠼⠑ ⠼⠋ ⠼⠛ ⠼⠓ ⠼⠊ ⠼⠚
1   2   3   4   5   6   7   8   9   0

Lesson 4 briefly mentioned that in Nemeth code, the numbers drop down to the lower part of the cell.

⠼⠂ ⠼⠆ ⠼⠒ ⠼⠲ ⠼⠢ ⠼⠖ ⠼⠶ ⠼⠦ ⠼⠔ ⠼⠴
1   2   3   4   5   6   7   8   9   0

In Nemeth code the numbers are in the lower part of the cell, so that you can combine them with letters. For example: 4a (⠼⠲⠁). In Unified English Braille a letter indicator (⠰) is used to tell the braille reader that the next cell is a letter. For example: 4a (⠼⠙⠰⠁).

There are signs for each mathematical symbol in both Nemeth code and Unified English Braille. The table below shows you the symbols.

Symbol Name	Print	Nemeth	UEB
plus sign	+	⠲	⠐⠖
minus sign	-	⠤	⠐⠤
Multiplication	• or x	⠈⠡ ⠬⠡ ⠈⠡	⠐⠦ ⠦⠦ ⠐⠲
Division	÷	⠨⠌	⠐⠌
Equals	=	⠀⠨�	⠐⠶
Percent	%	⠈⠴	⠨⠴
Decimal point	$	⠨	⠨
Question mark to fill in answer	?	⠿	⠐⠦
Dash for answer	----	⠤⠤⠤⠤	⠠⠤
parentheses	( )	⠷ ⠾	⠐⠣ ⠐⠜
Number with parentheses	(13)	⠷⠂⠒⠾	⠐⠣⠼⠁⠒⠐⠜
Comma	,	⠠	⠂
Degrees	°	⠘⠨⠡	⠘⠚
Letter sign	No equivalent	⠰	⠰

Examples:

Print: 4 · 9 = 36
Nemeth: ⠼⠙⠈⠡⠼⠊ ⠀⠨�⠀ ⠼⠒⠋
UEB: ⠼⠙⠐⠦⠼⠊ ⠐⠶ ⠼⠒⠋

Print: 329 + 5 = 334
Nemeth: ⠼⠒⠆⠔⠲⠼⠑ ⠀⠨�⠀ ⠼⠒⠒⠙
UEB: ⠼⠒⠆⠔⠐⠖⠼⠑ ⠐⠶ ⠼⠒⠒⠙

Print: 450 ÷ 10 = ?
Nemeth: �
UEB: ⠼⠙⠑⠚ ⠙⠊⠧ ⠼⠁⠚ ⠐⠶ ⠦

Print: 40% of 12 = $4.8
Nemeth: ⠼⠙⠚ � of ⠼⠁⠃ ⠨⠅ ⠈⠎⠙⠲⠓
UEB: ⠼⠙⠚⠨⠴ of ⠼⠁⠃ ⠐⠶ ⠈⠎⠼⠙⠲⠓

 Print: (5b+3c) = _____
 Nemeth: ⠷⠢⠃⠐�⠾ ⠨⠅ ⠤⠤⠤⠤⠤
UEB: ⠐⠣⠼⠑⠃⠐⠖⠼⠉⠉⠐⠜ ⠐⠶ ⠒⠒

 Print: $85.33 − 12.90 = ?
⠈⠎⠡⠑⠨⠉⠉ ⠓⠤⠂ ⠼⠁⠃⠲ ⠔⠚⠨⠊ ⠅⠤⠲⠲⠂ ⠁ ⠈⠠⠙⠕ ⠓⠤⠂ ⠙⠰⠕⠂⠂
⠼⠂⠂ ⠅⠤⠃⠤⠃⠂⠔ ⠨⠦⠃ ⠰⠆ ⠿ ⠣⠹ ⠣ ⠼⠸⠸⠂:Nemeth:
 ⠈⠎⠨⠡⠑⠨⠉⠉⠨⠤⠼⠁⠃⠨⠊⠚ ⠨⠅ ⠿
UEB: ⠈⠎⠼⠓⠑⠲⠉⠉⠤⠼⠁⠃⠲⠊⠚ ⠐⠶ ⠦

Print: 2, ___, 6
Nemeth: ⠼⠃⠂ ⠠⠤⠤⠤⠤⠠ ⠼⠋   2,_____, 6
UEB: ⠼⠃⠂ ⠒⠶⠒ ⠼⠋

Print: Round 1,498 to the nearest hundred.
Nemeth: ⠠⠗⠟⠙ ⠼⠁⠂⠙⠊⠓ ⠕⠕ ⠹⠑⠲⠝⠑⠌ ⠓⠥⠝⠙⠗⠂⠲
UEB: ⠠⠗⠳⠝⠙ ⠼⠁⠂⠙⠊⠓ ⠕⠕ ⠮ ⠝⠑⠜⠑⠌ ⠓⠥⠝⠙⠗⠑⠙⠲

Print: Bill has 49 candy bards and Sue has 13 gum balls. How many
do they have together?
Nemeth: ⠠⠃⠊⠇⠇ ⠓⠁⠎ ⠼⠙⠊ ⠒⠁⠝⠙⠽ ⠃⠁⠗ ⠎ ⠠⠁⠝⠙ ⠠⠎⠥⠑
⠓⠁⠎ ⠼⠁⠉ ⠛⠥⠍ ⠃⠁⠇⠇⠎⠲ ⠠⠓⠪ ⠍⠁⠝⠽ ⠙⠕ ⠹ ⠓⠁⠧ ⠞⠕⠛⠑⠹⠻⠦
UEB: ⠠⠃⠊⠇⠇ ⠓⠁⠎ ⠼⠙⠊ ⠉⠁⠝⠙⠽ ⠃⠁⠗⠙⠎ ⠠⠁⠝⠙ ⠠⠎⠥⠑ ⠓⠁⠎
⠼⠁⠉ ⠛⠥⠍ ⠃⠁⠇⠇⠎⠲ ⠠⠓⠪ ⠍⠁⠝⠽ ⠙⠕ ⠹ ⠓⠁⠧ ⠞⠕⠛⠑⠹⠻⠦

Reading 15 Nemeth

Reading 15 UEB

Reading 15 Answer Key

$5 + 10 =$ _____

$\$36 - ? = \$24$

$5 \times 8 - ? = 37$

_____ $+ 1.50 = 3.75$

$71.0 \cdot 35.25 = ?$

_____, 10, 15, and 20

Stacy has $80 and Chuck has $65 who has more?

9% of $65.30 is _____

$(84a + 4) + (35b - 10) = 240$

Writing 15

What is the area of a rectangle that is 2 feet on one side and 7 feet on the other?

$27 \times ? = 621$

$\$74.23 \div 3 = \underline{\hspace{1cm}}$

I paid 90 cents for 12 oranges and found that 3 of them were spoiled. How much did each good orange cost?

$51,858 - ? = 402$

$? + 64 + 58 + 37 = 265$

$15bc = 3b \times 5c$

30 is 5% of ?

Writing 15 Answer Key Nemeth

⠀⠀⠀⠨⠩⠮⠏⠀⠋⠑⠀⠁⠀⠹⠗⠙⠀⠕⠋⠀⠏⠕⠍⠏⠁⠞⠕⠑⠎⠀⠋⠀⠋⠑⠀⠲⠑⠀⠋⠕⠑⠃

⠉⠝⠀⠋⠃⠀⠎⠊⠝⠞⠑⠀⠁⠀⠲⠑⠀⠋⠑⠑⠃⠀⠉⠝⠀⠁⠀⠑⠫⠑⠂

⠵⠉⠲⠩⠮⠞⠓⠀⠉⠕⠀⠼⠑⠂⠋⠖

⠠⠹⠲⠱⠹⠹⠱⠲⠑⠱⠞⠉⠈⠀⠉⠕⠀⠨⠨⠨⠨⠨⠨

⠀⠀⠠⠋⠀⠋⠝⠀⠼⠊⠔⠂⠀⠞⠑⠲⠑⠗⠀⠃⠀⠲⠑⠑⠀⠕⠏⠁⠏⠑⠑⠗⠀⠃⠀⠋⠉⠉⠀⠋⠀⠲⠑

⠃⠀⠉⠝⠀⠃⠀⠹⠏⠕⠑⠋⠑⠋⠀⠰⠫⠑⠀⠋⠝⠀⠞⠑⠞⠀⠓⠑⠞⠀⠝⠝⠀⠕⠏⠁⠏⠑⠑⠝

⠞⠓⠊⠮

⠠⠹⠲⠱⠹⠁⠢⠢⠢⠢⠨⠚⠀⠉⠕⠀⠼⠑⠲⠊⠲

⠠⠠⠹⠲⠑⠑⠹⠲⠱⠹⠑⠢⠀⠉⠕⠀⠼⠑⠋⠑⠲

⠠⠲⠑⠢⠑⠞⠀⠉⠕⠀⠠⠹⠑⠱⠞⠎⠱⠑⠞

⠠⠹⠑⠲⠀⠋⠑⠀⠠⠹⠱⠞⠲⠀⠃⠀⠃

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Writing 15 Answer Key UEB

⠰⠺⠗⠊⠞⠑ ⠋⠕⠗ ⠁ ⠙⠕⠌ � ⠀⠃ ⠱⠕⠇⠙⠑⠚⠑⠞⠁⠑⠙ ⠝ ⠉⠝ ⠼⠃⠗

⠋⠕⠗⠙⠛ ⠞⠕ ⠹⠑ ⠙⠁⠞⠁ ⠊ ⠼⠏⠝ ⠋⠕⠗⠙⠛ ⠞⠕ ⠁ ⠎⠁⠋⠑⠆

⠼⠛⠏⠓⠄⠝��5�5 ⠶⠀ ⠼⠑⠛⠙⠄

⠀⠑⠼⠛⠋⠑⠘⠙⠞⠎⠝⠐⠞⠚⠞ ⠶⠀ ⠼⠇⠇⠄

⠀⠰⠋ ⠙⠕ ⠼⠊⠉⠙ ⠝⠄⠑⠚ ⠀⠃ ⠼⠋⠊⠑ ⠱⠏⠁⠞⠑⠑⠚ ⠐⠀ ⠋⠴⠝ ⠼

⠼⠙⠝ ⠀⠃ ⠈⠙⠝ ⠀⠷ ⠋⠞⠝⠑⠞⠁⠋⠑ ⠰⠑⠓⠑ ⠞⠎ ⠝⠑⠝ ⠓⠕⠞⠓ ⠼⠝

⠱⠏⠁⠞⠑⠞ ⠞⠝⠝⠼⠆

⠼⠛⠎⠝⠄⠓⠑⠓⠝⠣⠚⠚ ⠶⠀ ⠼⠝⠙⠛⠄

⠰⠓⠕⠄⠑⠼⠛⠏⠞⠓⠄⠑⠼⠞⠓⠓⠄⠑⠼⠞⠝ ⠶⠀ ⠼⠛⠏⠞⠄

⠼⠎⠝⠑⠼⠞⠞ ⠶⠀ ⠼⠝⠞⠆⠝⠑⠄⠑⠝⠼⠞

⠼⠎⠞⠑ ⠋⠕⠗ ⠼⠑⠝⠉⠙ ⠃ ⠀⠀