Lesson 14

Roman Numerals, Fractions, Mixed Numbers, Mathematical Signs of Operation, Superscripts and Subscripts, Electronic Addresses, Line Continuation Indicator, More On Translation Software

14.1 Roman Numerals [UEB §8.6.3, UEB Technical Materials 2.6]

14.1a In general. Use the braille letters, just as in print, when transcribing roman numerals. Observe the normal use of capital indicators, grade 1 indicators, and the standing alone rule. Examples:

V	XL	x	iii

VI-X	vi-x	V—X	v:x

pages ix-xii

see §VII

aVII   avii   WWII (World War II)

XXVa	xxA	VI.A

10th	xth	21st	XXIst

Ier   VIe (French ordinal ending)   5sten (German ordinal ending)

Drill 34

Practice brailling the following sentences. Use a 1-3 margin.

1. Edward VIII, son of George V, gave up his throne to marry the woman he loved.

2. The pertinent provisions may be found in §59B(ii).

3. Study the Introduction, x-xv, and §15 on pages 23-25.

4. The map of the Czech Republic is found on page XVI—XVI being one of the removable pages.

5. Her house is furnished with Louis XIVth furniture.

6. The pros and cons of socialized medicine are set forth in XIV.B of my outline.

14.2 Fractions and Similar Number Combinations [UEB §11.3]

14.2a Printed on different levels of type. The line separating the numerator and the denominator in a fraction is called the fraction line. When the numbers of a fraction are printed on different levels of type, whether directly above one another or offset diagonally, the fraction line is represented in braille by dots 34 (⠌). The fraction line does not terminate numeric mode, so the numeric indicator is not repeated following the fraction line. Example:

  ½ [or] $\frac{1}{2}$ ⠼⠂⠌⠃

14.3 Mixed Numbers [UEB §11.3.2]

14.3a Whole numbers plus fractions. Repeat the numeric indicator before the fraction. Example:

  2½   ⠼⠃⠼⠂⠌⠃

When a whole number is shown separated from a fraction by a space (as in stock quotations), follow print. Example:

  16 ⅜   ⠼⠁⠋ ⠼⠒⠌⠓

14.3b With hyphens and dashes. Because hyphens and dashes terminate numeric mode, the numeric indicator is repeated if fractions are connected to other numbers of any type by a hyphen or dash.

Examples:

½-¾　⠠⠿⠀⠿　⠀⠿⠀⠿　½ — 1½　⠀⠿　⠀⠿

½ - 1　⠀⠿ ⠀⠿ ⠀⠿

3½-4½　⠿⠿⠿⠿　2½—3　⠿⠿⠿⠿

0 — ½　⠿　⠀⠿　⠀⠿　9 - 8½　⠿ ⠀⠿ ⠀⠿

14.4 Printed on Same Level of Type

When a diagonal slash occurs between numbers that are printed on the same level of type, the two-cell slash should represent the dividing line. The slash terminates numeric mode, and therefore the numeric indicator is repeated following the slash. Example:

3/4 lb of butter

He wrote 15/30 on the list.

A waltz is played in 3/4 time.

14.5 Mathematical Signs of Operation

Unified English Braille contains equivalents for nearly all print mathematical symbols. However, for many years, in the United States, mathematical expressions in textbooks and classroom material and books on mathematics have been brailled using a system called the *Nemeth Braille Code for Mathematics and Science Notation*. The code is quite different from UEB and should only be studied after the ability to transcribe non-technical materials has been thoroughly mastered.

In this course, you will learn some common UEB symbols that are often found in general literature, including cookbooks, newspaper articles, and the like.

plus sign	+	⠔⠖
minus sign	−	⠔⠤
multiplication sign	×	⠔⠦
division sign	÷	⠔⠌
equals sign	=	⠔⠶
open angle bracket (or is less than)	<	⠈⠣
closing angle bracket (or is greater than)	>	⠈⠜
ratio	:	⠒

Follow print spacing. Like other nonalphabetic symbols, these terminate the effect of numeric mode, so the numeric indicator is repeated if an unspaced number follows them. Examples:

A 24× lens

⠠⠁ ⠼⠃⠙⠦ ⠇⠢⠎

All of the houses were $200K+.

⠠⠁⠇⠇ ⠷ ⠮ ⠓⠳⠎⠑⠎ ⠺⠻⠑ ⠼⠂⠼⠃⠴⠴⠠⠅⠖⠲

Contact me at <me@contact.net>.

⠠�⠝⠞⠁⠉⠞ ⠍⠑ ⠁⠞ ⠈⠣⠍⠑⠈⠜...⠲

This is my favorite! <3 <3 <3

⠠⠞ ⠊⠎ ⠍⠽ ⠋⠁⠧⠕⠗⠊⠞⠑⠖ ⠈⠣⠼⠉ ⠈⠣⠼⠉ ⠈⠣⠼⠉

# of students ÷ 4 = # of pizzas to order

⠸⠼ ⠷ ⠎⠞⠥⠙⠢⠞⠎ ⠘⠌ ⠼⠙ ⠘⠶ ⠸⠼ ⠷ ⠏⠊⠵⠵⠁⠎ ⠞⠕ ⠕⠗⠙⠻

The map was drawn on a scale of 1:500.

⠠⠮ ⠍⠁⠏ ⠷ ⠙�⠲⠝ ⠕⠝ ⠁ ⠎⠉⠁⠇⠑ ⠷
⠼⠁⠒⠑⠚⠚⠲

a 9 × 12 ft. rug

a 7×9×2″ box

7′W × 9″D

14.6 Superscripts and Subscripts [UEB §11.4.2]

superscript: dots 35 (9)

subscript: dots 26 (5)

You will note that these two symbols are the same as those used for the contractions for *en* and *in.* Therefore, these symbols only have the meanings above when in numeric or grade 1 mode.

14.6a Placement. The superscript and subscript indicators mean that the next letter, symbol, or entire number (including any decimals), is in the superscript or subscript position. These symbols are brailled, in accordance with placement and spacing in print, in formulas, footnote reference numbers, and the like. (More on footnotes will be studied in Lesson 17.) Unless grade 1 or numeric mode has been invoked for another reason, place a grade 1 indicator before the superscript and subscript indicators. Examples:

The CO_2 levels are rising in the atmosphere.

According to Thomassen[9] and McAllister,[10] the senior population will double by 2030.[11]

14.6b Ordinal Numbers. If the letters in an ordinal number are
superscripted, the superscript is generally ignored in braille.

Example:

Get off on the 5th floor.

⠠⠛⠑⠞ ⠕⠋⠋ ⠕⠝ ⠮ ⠼⠑⠹ ⠋⠇⠕⠕⠗⠲

14.7 Computer Materials, Line Continuation Indicator [UEB §6.10.3, 10.12.3; UEB Technical Materials §17.2]

Follow normal contraction usage rules in email addresses, URLs, and the
like when they are embedded in the regular text. When a number in the
address prevents the use of contractions following the number, insert a
grade 1 terminator after the number so that the contractions can be used
if space would be saved by doing so.

A *line continuation indicator,* dot 5 (⠐) is used when it is necessary to
divide a long electronic address that will not fit on one line. This indicator
can also be used in numbers and other symbols-sequences too long for
one line. Make the division at a logical break and at a point that is <u>not
between two letters or between two digits.</u> Examples:

http://www.4parsoncheesefactory.com/contact_us_now.asp

⠶⠓⠱⠏⠒⠌⠌⠺⠺⠺⠄⠼⠙⠐⠏⠜⠎⠕⠝⠡⠑⠑⠎⠑⠋⠁⠉⠞⠕⠗⠽⠄⠉⠕⠍⠌⠉⠕⠝⠞⠁⠉⠞
⠸��⠝⠪⠺⠄⠁⠎⠏⠶

The findings cited above were retrieved from
http://www.dnt.org/Media/Research/pdf/session1-stanton-hodges-gortner-
lairusis-martinez-paper-tea2014.pdf

⠠⠮ ⠿⠔⠮⠛⠎ ⠉⠰⠙ ⠁⠿⠧⠑ ⠶ ⠗⠑⠞⠗⠊⠑⠧⠫ ⠿

⠶⠓⠱⠏⠒⠌⠌⠺⠺⠺⠄⠙⠝⠞⠄⠕⠗⠛⠌⠠⠍⠑⠙⠊⠁⠌

⠠⠗⠑⠎⠑⠜⠡⠌⠏⠙⠋⠌⠎⠑⠎⠎⠊⠕⠝⠼⠁⠐⠤⠎⠞⠁⠝⠞⠕⠝⠤⠓⠕⠙⠛⠑⠎⠤

⠛⠕⠗⠞⠝⠻⠤⠇⠁⠊⠗⠥⠎⠊⠎⠤⠍⠜⠞⠊⠝⠑⠵⠤⠏⠁⠏⠻⠤

⠞⠑⠁⠼⠃⠚⠼⠙⠄⠏⠙⠋

Drill 35

Practice brailling the following sentences. Use a 1-3 margin.

1. Does ½ x 6¾ = 3⅓?

2. The young ballistics expert determined that death had been caused by a .32-caliber automatic.

3. He bought the stock at 85 5/16 and sold it at 88 15/16.

4. A rod = $5\frac{1}{2}$ yd., or $16\frac{1}{2}$ ft.

5. The length of the astronomical year is about 365¼ days, or 365 da., 5 hr., 48 min., 45.51 sec.

6. After deducting withholding tax, 6½% for retirement and $3.75 for life insurance, his take-home pay amounted to $463.29 every week.

7. He won the match in three straight sets: 6-3, 6-2, and 6-2, although his opponent had been a 3-1 favorite.

8. General Custer's men were armed with .45/70 Springfield rifles.

9. The cherry pie recipe calls for 2½-3 cups of sugar.

10. The board he cut was ½ - ¾ in. too long.

11. The rug measured 9' × 12', but the room was 8' ½" x 11' ¾".

12. $E = mc^2$ expresses the theory of relativity.

13. Visit <http://www.greatbooks.org/bookshelves/snid=243> for more details.

14. The 1st Battalion - 64th Armor Regiment is often referred to as the 1/64.

14.8 More On Braille Translation Software

14.8a Character Styles. In addition to the paragraph styles discussed in Lesson 13, there are also styles meant to be applied to specifically selected text rather than to an entire paragraph. For instance, when working with the print version of a document, applying the subscript or superscript attribute to the appropriate text will cause the correct braille indicators to appear when the document is translated to braille. Always be sure to check the results.

14.8b Numeric Spaces. When the use of numeric spaces (studied in Lesson 13) is appropriate within a complete number, use your word processor or braille translation software to insert a "hard space" or "non-breaking space" where the numeric space should occur. This should cause numeric spaces to appear when the document is translated from print to braille.

<div align="center">

EXERCISE

</div>

Prepare the following exercise for submission to the instructor. Use a 1-3 margin. Transcriber's notes need not be added to this exercise material. When you have successfully completed this exercise, your instructor will

provide you with an additional reading exercise to complete before proceeding to Lesson 15.

LESSON 14

1. The high jump was won by Samuel Speed III, who cleared the bar at 6 ft., 10¾ in. — ¼ in. higher than the previous school record.

2. At 6½% interest his investment of $3700.00 yielded a return of just $240.50.

3. In 1952 the principal causes of accidents were: automobiles, 40%; at home, 22.5%; sports and recreation, 15.4%; pedestrians, 8.3%; travel, 6.6%.

4. In the late 19th century the American Experience Table of Mortality gave the life expectancy at age 10 as 48.72 years and at age 95 as .50 years.

5. Find the Diamonds+ location nearest you by calling 345 282 9832 or by visiting www.diamondsplus.net/292=NearbyStoreLocations.php.

6. For many years a minute of silent prayer was observed each November 11th, 11:00–11:01 a.m., to commemorate the signing of the armistice ending World War I.

7. Friday, 2-4 p.m., will be devoted to interviewing applicants for the new position.

8. The banquet proceedings will be live tweeted from @MSPNews beginning promptly at 6:30 p.m; follow hashtag #MSP2015 for other comments.

9. Visit our Web site at: <http://www4.rigley_13sim/office.org/index>.

10. With ⅔ of the precincts already reported, the Governor leads his nearest competitor 189,769–160,323, though he had been given less than a 50-50 chance of winning by the pollsters.

11. After 15 innings the two teams were still deadlocked 3–3.

12. The motor number of the stolen car is 030/692.

13. To-day AT&T stock closed at 36 ¾, up ⅝.

14. Articles V-VII of the society's constitution deal with the powers and duties of the officers.

15. The title page at the beginning of every braille volume lists the number of braille pages contained in that volume — thus, Pages i-xix and 1-79.

16. Pope John XXIIIrd did much to promote the ecumenical movement.

17. King Louis XVth of France is supposed to have said, "After me, the deluge."[14]

18. Many cities were demolished by the end of World War II—III will probably see the destruction of civilization.

19. Charles I (1600-1649) was beheaded by the Parliamentary faction in England.

20. The mysterious crate measured 6'H x 9'W x 2'D.

21. Move all of the little girls' dresses, sizes $4\frac{1}{2}$-6, to the next rack.

22. Barber, please trim my hair ¼ - ½ inch.

23. You need not worry; a person's temperature is normal when it falls in the 98.4º – 99.2º range.

24. Add a hydrogen ion to H_2O to get heavy water, D_2O.

25. More than 1/3 of our staff will be on vacation from 6/14 to 7/1.

26. Dad still has 20/20 vision, but he doesn't hear very well.