

# Preparation Manual Braille (283)

Overview and Exam Framework Sample Selected-Response Questions Sample Selected-Response Answers and Rationales Sample Transcription Questions Sample Transcription Answers

# Section 3: Overview and Exam Framework Braille (283)

## **Exam Overview**

Exam Name	Braille
Exam Code	283
Time	5 hours
Number of Questions	29 selected-response questions 4 transcription assignments
Format	Computer-administered test (CAT)

The TExES Braille (283) exam is designed to assess whether an examinee has the requisite braille knowledge and skills that an entry-level teacher of students who are visually impaired (TVI) in Texas public schools must possess. The 29 selected-response questions and 4 transcription assignments are based on the Braille exam framework. The exam may contain questions that do not count toward the score. Your final scaled score will be based only on scored questions.

## **The Standards**

Standard VII	The teacher of students with visual impairments, including those with additional disabilities, knows how to read contracted and uncontracted literary braille and Nemeth Code.
Standard VIII	The teacher of students with visual impairments, including those with additional disabilities, knows how to produce contracted and uncontracted literary braille and Nemeth Code.

## Transitioning to Unified English Braille (UEB)

Unified English Braille (UEB) replaced English Braille American Edition (EBAE) as an official braille code of the United States on January 4, 2016. See the Braille Authority of North America (BANA) announcement at <a href="http://www.brailleauthority.org/ueb/implementation/statement.html">www.brailleauthority.org/ueb/implementation/statement.html</a>.

Texas is working toward implementing the transition from EBAE to UEB. In keeping with the planned transition, this exam assesses knowledge of UEB rather than EBAE. (See <a href="https://www.brailleauthority.org/ueb/implementation/statement.html">www.brailleauthority.org/ueb/implementation/statement.html</a>.)

**Note:** The following list of domains and competencies reflects the fact that this exam assesses knowledge of UEB rather than EBAE.

# **Domains and Competencies**

Domain	Domain Title	Approx. Percentage of Exam	Standards Assessed
I	Reading Unified English Braille (UEB) and Nemeth Code	50%	Braille VII
II	Producing Unified English Braille (UEB) and Nemeth Code	50%	Braille VIII



The content covered by this exam is organized into broad areas of content called **domains**. Each domain covers one or more of the educator standards for this field. Within each domain, the content is further defined by a set of **competencies**. Each competency is composed of two major parts:

- The **competency statement**, which broadly defines what an entry-level educator in this field in Texas public schools should know and be able to do.
- The descriptive statements, which describe in greater detail the knowledge and skills eligible for testing.

## Domain I—Reading Unified English Braille (UEB) and Nemeth Code

Competency 001—The teacher of students with visual impairments, including those with additional disabilities, knows how to read UEB.

The beginning teacher:

- A. Identifies the correct UEB transcription of text.
- B. Identifies and corrects errors in a UEB transcription.

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to read Nemeth Code.

The beginning teacher:

A. Identifies the correct Nemeth Code transcription of math expressions.

## Domain II—Producing Unified English Braille (UEB) and Nemeth Code

Competency 001—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB using a slate and stylus.

The beginning teacher:

A. Transcribes short selections into UEB using a 27- or 28-cell standard slate and stylus and 8½-by-11-inch paper.

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB and Nemeth Code using a braillewriter.

The beginning teacher:

- A. Transcribes passages into UEB.
- B. Transcribes math expressions into Nemeth Code.
- C. Demonstrates competence in referring to reference material to produce Nemeth Code.

# Knowledge of Unified English Braille (UEB) and Nemeth Code

The following is a list of the aspects of UEB and the Nemeth Code that will be assessed in the exam. Aspects of UEB and Nemeth Code marked (R) will be included in the reference guide provided with the production section of the exam, and will be tested only in the production section. Aspects to be tested only in the production section (but not included in the reference guide) are marked (P). In either case, aspects that are **tested** only in the production section may **appear** in the reading section but will not be **tested** there (i.e., no transcription errors involving those aspects will be introduced in the answer choices of a question in the reading section).

### UEB

- A. <u>Punctuation</u>: period, question mark, exclamation point, comma, semicolon, colon, hyphen, quotation mark (double "" only), apostrophe, dash (long dash), ellipsis (P), forward slash (P), omission indicator/underscore/low-line symbol (R)
- B. Enclosures: Parentheses ()
- C. <u>Other symbols</u>: at sign/commercial at (@), percent (%), dollars (\$), cents (¢), bullet (•) (R), degrees (°) (R), ampersand (&) (R), asterisk (\*) (R), plus (+), minus ( −), equals (=) (R), Arabic numbers, dates with slash (e.g., 3/15/2015), time with colon (e.g., 9:15 a.m.), common fractions with fraction written vertically (e.g., 1/2 or <sup>1</sup>/<sub>2</sub>)
- D. <u>Simple formats</u>: center heading (P), paragraph indentation (P), simple list with text that goes to next line (P)
- E. <u>Indicators and typeforms</u>: capitalization (capital letter indicator, capitalized word indicator, capitalized passage indicator, terminator); grade 1 mode (including grade 1 indicators and the use of grade 1 mode for initials); italics typeform (symbol, word, passage, terminator)
- F. <u>Alphabetic wordsigns</u>: but, can, do, every, from, go, have, just, knowledge, like, more, not, people, quite, rather, so, that, us, very, will, it, you, as
- G. <u>Strong contractions</u>: and, for, of, the, with as wordsigns (i.e., standing alone) and groupsigns (i.e., as parts of words)

- H. Strong wordsigns: child, shall, this, which, out, still
- I. Strong groupsigns: ch, gh, sh, th, wh, ed, er, ou, ow, st, ing, ar
- J. Lower wordsigns: be, enough, were, his, in, was
- K. Lower groupsigns: ea, be, bb, con, cc, dis, en, ff, gg, in
- L. <u>Initial-letter contractions both as groupsigns and when standing alone</u>: upon, these, those, whose, word, cannot, had, many, spirit, their, world, day, ever, father, here, know, lord, mother, name, one, part, question, right, some, time, under, young, there, character, through, where, ought, work
- M. Final-letter groupsigns: ound, ance, sion, less, ount, ence, ong, ful, tion, ness, ment, ity
- N. <u>Shortforms</u>: All 75 shortform words standing alone; rules for use of 10 special shortform words (among the 75) within a longer word: braille, great, children, blind, first, friend, good, letter, little, quick (UEB Rules 10.9.3)

### **Nemeth Code**

- A. Signs of operation/comparison: plus (+), minus (–), multiplication cross (×), multiplication dot ( · ) (R), division ( ÷ ), equals (=), less than (<) (R), greater than (>) (R)
- B. Numbers and numeric mode: Arabic numbers, dates with slash (e.g., 3/15/2015), time with colon (e.g., 9:15 am), common fractions with fraction written vertically (e.g.,  $\frac{1}{2}$ ), mixed numbers (R)
- C. Grouping symbols: parentheses ()
- D. Sign of omission (R)
- E. Miscellaneous signs and symbols: percent (%), dollars (\$), cents (¢), degrees (°) (R)
- F. Punctuation: comma, colon, decimal point, punctuation indicator
- G. Algebraic expressions and equations (R) (e.g., 2x + 3 = 12 or x + 3x = ?)
- H. Geometry shape symbols and symbols of comparison: triangle ( $\Delta$ ) (R), square ( $\Box$ ) (R), angle ( $\angle$ ) (R), parallel ( $\parallel$ ) (R), perpendicular ( $\perp$ ) (R), and congruent ( $\cong$ ) (R)

## **Important Information About the Exam**

For the TExES Braille exam, you **must** bring the following:

- a manual (nonelectric) braillewriter that accommodates standard 11<sup>1</sup>/<sub>2</sub>-by-11-inch braille paper
- a 4-line, 27- or 28-cell traditional (that is, used from right to left, not a direct slate that is used from left to right) slate and stylus that accommodates 8½- by-11-inch braille paper.

Please note the following important information:

- Before exam day, make sure your braillewriter is functioning properly; problems caused by malfunctioning braillewriters (e.g., ghost/shadow dots) might negatively affect the scoring of your transcriptions.
- If you do not bring an appropriate braillewriter and slate and stylus with you to the test center, you will not be permitted to test.
- Because erasures detectable by touch might negatively affect the scoring of your transcriptions (i.e., they are counted as errors), it is recommended that you bring and use a braille eraser.

- Braille paper will be provided at the test center; you may not bring your own braille paper. All equipment is subject to inspection before being allowed into the testing room.
- For each of the four transcription assignments, you must use the device specified in the exam instructions. You must transcribe each assignment in the braille code specified in the exam instructions. Transcriptions in a braille code other than the one specified will receive a score of 0.
- Unscorable transcriptions will receive a score of 0. Unscorable transcriptions include those produced on the wrong device and unreadable transcriptions (e.g., too lightly embossed, overlapping lines of text, prevalent ghost/shadow dots, etc.).

# Section 4: Sample Selected-Response Questions Braille (283)

This section presents some sample exam questions for you to review as part of your preparation for the exam. To demonstrate how each competency may be assessed, sample questions are accompanied by the competency that they measure. While studying, you may wish to read the competency before and after you consider each sample question. Please note that the competency statements do not appear on the actual exam.

For each sample exam question, there is a correct answer and a rationale for each answer option. The sample questions are included to illustrate the formats and types of questions you will see on the exam; however, your performance on the sample questions should not be viewed as a predictor of your performance on the actual exam.

## Domain I—Reading Unified English Braille (UEB) and Nemeth Code

## Reading Unified English Braille (UEB)

Competency 001—The teacher of students with visual impairments, including those with additional disabilities, knows how to read UEB.

For each question, read the sentence given; then select the correct Unified English Braille (UEB) transcription of the sentence from the answer choices given.

There are two types of questions that assess reading UEB.

In the first type ("Select the Correct Transcription" questions), each question consists of a statement in printed text followed by four options in simulated braille. You must choose which of the four options (labeled A, B, C, or D) is the correct UEB transcription of the printed statement.

In the second type ("UEB Error Correction" questions), each question is based on a statement and its UEB transcription, which includes some errors. You must choose which of the four options (labeled A, B, C, or D) best describes what should be done to correct an error in the transcription.

The statements in the questions are representative of the types of material that a VI teacher may be called upon to transcribe into braille for a student with a visual impairment. The statements may come from a variety of educational materials, such as history books, English worksheets, health texts, information about field trips, instructions for class activities, and the like. The questions below are examples of these types of questions.

**Directions for Questions 1–7:** For each question, read the sentence given; then select the correct Unified English Braille (UEB) transcription of the sentence from the answer choices given.

1. Coach got permission for an extra practice before the big game!

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Answer \_\_\_\_\_

2. Juan's e-mail address is jaunt@yootmail.com.

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Answer

3. A "rotation" is a transformation that turns a figure around a given point.

 4. Her science research study had to do with finding out which color of light is best for reading.

A.
B.
C.
A.
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Answer \_\_\_\_\_

5. Commencement for the Class of 2020 will be on Saturday, June 13, 2020 at 2:30 p.m.

Answer \_\_\_\_\_

6. There will be an assembly in the gymnasium during seventh period.

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Answer \_\_\_\_\_

7. The teacher said, "Write the verbs in the blanks at the bottom of the page."

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Answer \_\_\_\_\_

**Directions for Questions 8 and 9:** Each question in this group is based on a sentence and its Unified English Braille (UEB) transcription, which includes some errors. For each question, select the best of the answer choices given.

The two questions are based on the sentence and transcription below.

The teacher reminded students in the class to bring a dictionary to assist in editing their essays about Westward Expansion.

- 8. Which of the following should be done to correct an error in the UEB transcription?
  - A. Transcribe the word "reminded" as
  - B. Transcribe the word "teacher" as
  - C. Transcribe the word "dictionary" as
  - D. Transcribe the word "assist" as

Answer \_\_\_\_\_

- 9. Which of the following should be done to correct an error in the UEB transcription?
  - A. Transcribe the word "about" as
  - B. Transcribe the word "editing" as
  - C. Transcribe the word "their" as
  - D. Transcribe the word "Westward" as

Answer \_\_\_\_

## **Reading Nemeth Code**

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to read Nemeth Code.

Questions of this type consist of a mathematical problem or expression that is shown in print and then followed by four options in simulated braille. You must choose which of the four choices (labeled A, B, C, or D) is the correct Nemeth Code transcription of the printed math problem or expression.

The math problems or expressions that appear in the questions are representative of the types of material that a VI teacher may be called upon to transcribe for a student with a visual impairment. Typical examples include simple addition, subtraction, multiplication, and division problems, and problems involving money or percentages.

**Directions for Questions 10–11:** For each question, read the problem or statement given; then select the correct Nemeth Code transcription from the answer choices given.

10.67.5%

 Answer \_\_\_\_

11. 2(7 - 1) + 9 ÷ 3 > 14

Answer \_\_\_\_\_

## Section 4: Sample Selected-Response Answers and Rationales Braille (283)

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1. Coach got permission for an extra practice before the big game!

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#### Answer

**Option D is correct** because it is the correct transcription. **Option A is incorrect** because "sion" (a final-letter groupsign) in "permission" is incorrect; it should be dots 4-6, 1-3-4-5. **Option B is incorrect** because "before" (a shortform word) is incorrect; it should be dots 2-3, 1-2-4. **Option C is incorrect** because a question mark is used instead of an exclamation point; it should be dots 2-3-5.

#### 2. Juan's e-mail address is jaunt@yootmail.com.

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#### Answer

**Option A is correct** because it is the correct transcription. **Option B is incorrect** because the @ sign is incorrect; it should be dots 4, 1. **Option C is incorrect** because the hyphen between "e" and "mail" is incorrect; it should be dots 3-6. **Option D is incorrect** because the hyphen between "e" and "mail" is incorrect and should be dots 3-6, and because the @ sign is misformed and should be dots 4, 1.

3. A "rotation" is a transformation that turns a figure around a given point.

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#### Answer

**Option B is correct** because it is the correct transcription. **Option A is incorrect** because dots 4-5 should not be used before the opening and closing quotation marks. These should be non-specific quotation marks: dots 2-3-6 for the opening quotation mark and dots 3-5-6 for the closing quotation mark. **Option C is incorrect** because in the word "transformation," the strong contraction for "for" (dots 1-2-3-4-5-6) should be used. **Option D is incorrect** because in the word "around," the final-letter groupsign for "ound" (dots 4-6, 1-4-5) should be used.

4. Her science research study had to do with finding out which color of light is best for reading.

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#### Answer

**Option D is correct** because it is the correct transcription. **Option A is incorrect** because in the word "science," the "ence" (a final-letter groupsign) should be dots 5-6, 1-5. **Option B is incorrect** because "which" (a strong wordsign) is incorrect; it should be dots 1-5-6. **Option C is incorrect** because "gh" (a strong groupsign) in "light" is incorrect; it should be dots 1-2-6.

5. Commencement for the Class of 2020 will be on Saturday, June 13, 2020 at 2:30 p.m.

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Answer

**Option C is correct** because it is the correct transcription. **Option A is incorrect** because the final-letter groupsign for "ment" (dots 5-6, 2-3-4-5) should be used in "commencement." **Option B is incorrect** because the initial-letter contraction for "day" (dots 5, 1-4-5) should be used in "Saturday." **Option D is incorrect** because it omits the required numeric indicator sign (dots 3-4-5-6) after the colon in the time "2:30."

6. There will be an assembly in the gymnasium during seventh period.

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Answer

**Option A is correct** because it is the correct transcription. **Option B is incorrect** because the initial-letter contraction should be used for "there" (dots 5, 2-3-4-6). **Option C is incorrect** because "in" (a lower wordsign) is misformed as "en"; it should be dots 3-5. **Option D is incorrect** because "during" uses the "in" contraction instead of the required strong groupsign "ing" (dots 3-4-6).

7. The teacher said, "Write the verbs in the blanks at the bottom of the page."

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D.	:		•:	:	::			•					•				•	::		H		:		:	•:		•	•••			

Answer

**Option D is correct** because it is the correct transcription. **Option A is incorrect** because "said" (a shortform word) should be dots 2-3-4, 1-4-5. **Option B is incorrect** because "er" (a strong groupsign) should be contracted in "verb" using dots 1-2-4-5-6. **Option C is incorrect** because "of" (a strong contraction) is misformed as "with"; it should be dots 1-2-3-5-6.

**Directions for Questions 8 and 9:** Each question in this group is based on a sentence and its Unified English Braille (UEB) transcription, which includes some errors. For each question, select the best of the answer choices given.

The two questions are based on the sentence and transcription below.

The teacher reminded students in the class to bring a dictionary to assist in editing their essays about Westward Expansion.

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8. Which of the following should be done to correct an error in the UEB transcription?

- A. Transcribe the word "reminded" as
- B. Transcribe the word "teacher" as
- C. Transcribe the word "dictionary" as
- D. Transcribe the word "assist" as

#### Answer

**Option B is correct** because the word "teacher" should use the "ea" lower groupsign and the "er" strong groupsign. **Option A is incorrect** because it recommends spelling out the word "reminded" instead of using the "in" lower groupsign and the "ed" strong groupsign. **Option C is incorrect** because it recommends the strong groupsign "gh" but the transcription incorrectly uses the "ar" strong groupsign. **Option D is incorrect** because it recommends the strong groupsign.

9. Which of the following should be done to correct an error in the UEB transcription?

- A. Transcribe the word "about" as
- B. Transcribe the word "editing" as
- C. Transcribe the word "their" as
- D. Transcribe the word "Westward" as

#### Answer

**Option C is correct** because the word "their" should use the initial-letter contraction, but instead uses the contraction for "there." **Option A is incorrect** because it recommends spelling out the word "about" but the transcription correctly uses the shortform "ab". **Option B is incorrect** because it recommends spelling out the "ed" in the word "editing" but the transcription correctly uses the "ed" strong groupsign. **Option D is incorrect** because it recommends a misplaced dot that changes the "ar" to an "s", but the transcription correctly uses the "ar" strong groupsign.

## **Reading Nemeth Code**

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to read Nemeth Code.

Questions of this type consist of a mathematical problem or expression that is shown in print and then followed by four options in simulated braille. You must choose which of the four choices (labeled A, B, C, or D) is the correct Nemeth Code transcription of the printed math problem or expression.

The math problems or expressions that appear in the questions are representative of the types of material that a VI teacher may be called upon to transcribe for a student with a visual impairment. Typical examples include simple addition, subtraction, multiplication, and division problems, and problems involving money or percentages.

**Directions for Questions 10–11:** For each question, read the problem or statement given; then select the correct Nemeth Code transcription from the answer choices given.

10.67.5%

C.		:	::		•	•	••
D.	.:		::	:::	•	•	

#### Answer

**Option D is correct** because it is the correct transcription. **Option A is incorrect** because the numbers are not Nemeth Code numbers but are UEB numbers, and because the UEB decimal point is used instead of the Nemeth Code decimal point. **Option B is incorrect** because the percent symbol is incorrect; it should be dots 4, 3-5-6. **Option C is incorrect** because the percent symbol is incorrect; it should be dots 4, 3-5-6.

#### 11. 2(7 – 1) + 9 ÷ 3 > 14

A.	 	•		•
В.	 :::	. • •	••	
C.	 :::	•		
D.	 :::	•		

#### Answer

**Option C is correct** because it is the correct transcription. **Option A is incorrect** because the division symbol is incorrect; it should be dots 4-6, 3-4 rather than dots 3-4. **Option B is incorrect** because the minus symbol is incorrect; it should be dots 3-6 rather than dots 6, 3-6. **Option D is incorrect** because the number 14 is misformed as the number 10.

# Section 5: Sample Transcription Questions Braille (283)

The purpose of this section is to describe the types of transcription questions that you will see on the Braille exam and show the exam directions, sample questions, and the score scales that will be used to score your responses.

## Domain II—Producing Unified English Braille (UEB) and Nemeth Code Producing UEB with a Slate and Stylus

Competency 001—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB using a slate and stylus.

For this section of the exam, you will be asked to use a slate and stylus to transcribe a set of three brief selections into UEB.

The selections are representative of the types of information that a slate and stylus are commonly used to record. Each set of selections includes a name, address, phone number and e-mail address; a shopping list; and a brief note to a student.

## Directions

This question involves transcribing three selections into UEB. Your transcription must be made using a traditional (not direct) 4-line, 27- or 28-cell slate and stylus that can accommodate the 8½-by-11-inch braille paper provided by the exam administrator. You should transcribe each selection exactly as written starting at the left margin. Skip one line between selections. All three selections must be transcribed onto one sheet of braille paper.

The three selections include:

- 1. A name, address, phone number, and e-mail address
- 2. A shopping list
- 3. A note to a student from a teacher

Errors that will be counted as incorrect in your transcription include

- 1. Contractions, indicators, or shortforms omitted or misused
- 2. Characters misformed (including added or omitted dots)
- 3. Characters omitted or extra ones inserted (including hyphenation of words not hyphenated in the text)
- 4. Words omitted or repeated
- 5. Indicators or punctuation marks omitted or misused or extra ones inserted
- 6. Spacing errors (including improper spacing between words, lines, or selections)
- 7. Formatting errors (including improper line breaks or margins)
- 8. Erasures detectable by touch

If you need additional braille paper, raise your hand and notify the exam administrator. When you have completed your final version of the transcription, check the appropriate box at the bottom of the page containing your final version. Your score for this question will be based solely on the version of your transcription that you designate as the final version.

### Sample Question

1. Use a slate and stylus to transcribe the following selections into Unified English Braille (UEB). Transcribe the selections exactly as written. Skip one line between selections. Transcribe all selections onto the same sheet of paper.

J. W. Smith 8590 Main Avenue North Austin, Texas 78743 (214) 555-8983 smith99@mail.net

apples bread chocolate milk coffee beans ground beef

Excellent work! Your answer was concise.

Answer \_\_\_\_\_

## **Producing UEB with a Braillewriter**

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB and Nemeth Code using a braillewriter.

For this section of the exam, you will be presented with a short (80–100 word) passage to transcribe into contracted braille using a manual (nonelectric) braillewriter.

The passage will be representative of the type of instructional material that a teacher of the visually impaired may be called upon to transcribe into braille for a student who has a visual impairment. The passage might contain an analysis of a poem, a description of a scientific process, an assignment related to an English or history unit, directions for a class project, or similar instructional materials.

### **Directions**

This question involves transcribing a passage into UEB. Your transcription must be made using a manual (nonelectric) braillewriter that can accommodate the 11<sup>1</sup>/<sub>2</sub> -by-11-inch braille paper provided by the exam administrator. Use a 40-cell line and make maximum use of each line. Do not hyphenate words unless they are hyphenated in the text. The final version of your transcription must fit on one sheet of braille paper.

Errors that will be counted as incorrect in your transcription include:

- 1. Contractions, indicators, or shortforms omitted or misused
- 2. Characters misformed (including added or omitted dots)
- 3. Characters omitted or extra ones inserted (including hyphenation of words not hyphenated in the text)

- 4. Words omitted or repeated
- 5. Indicators or punctuation marks omitted or misused or extra ones inserted
- 6. Spacing errors (including improper spacing between words or lines)
- 7. Formatting errors (including improper line breaks and margins)
- 8. Erasures detectable by touch

If you need additional braille paper, notify your exam administrator. When you have completed your final version of the transcription, check the appropriate box at the bottom of the sheet containing your final version. Your score for this question will be based solely on the version of your transcription that you designate as the final version.

### **Sample Question**

2. Use a braillewriter to transcribe the following passage into UEB. Use a 40-cell line and make maximum use of each line. Do not hyphenate words unless they are hyphenated in the text. The final version of your completed transcription must fit on a single sheet of braille paper.

#### **Growing Orchids**

An interesting hobby that several friends and I have undertaken at home is growing orchids. Orchids are beautiful and, although they appear to be very delicate, they are in fact quite hardy. My favorite and the easiest to grow is Phalaenopsis. They come in a variety of colors and will bloom for months and months at a time! The Phalaenopsis is a low-light orchid, making it a good choice for anyone who does not have a window with direct sunlight. To learn more about growing orchids at home visit the Orchid Growers' Association web site at http://www.orchidgrowers.org/.

Answer \_\_\_\_\_

## **Producing Nemeth Code with a Braillewriter**

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB and Nemeth Code using a braillewriter.

For this transcription assignment, you will be presented with a math worksheet to transcribe into Nemeth Code using a manual (nonelectric) braillewriter.

The worksheet will contain problems and statements that are representative of the type of material that a TVI may be called upon to transcribe into Nemeth Code for a student who has a visual impairment. Note that you are asked only to transcribe the worksheet, not to solve any of the problems.

### **Directions**

This question involves transcribing a set of mathematical problems and statements into Nemeth Code. Your transcription must be made using a manual (nonelectric) braillewriter that can accommodate the 11½-by-11-inch braille paper provided by your exam administrator. Include all punctuation marks. Skip one line between problems.

The final version of your completed transcription must fit on a single sheet of braille paper.

**Remember:** You are NOT to transcribe this set of mathematical problems and statements into Unified English Braille (UEB); you MUST transcribe them into Nemeth Code. All problem numbers must be brailled in Nemeth Code as well. Do not include any switch indicators in your transcription.

Errors that will be counted as incorrect in your transcription include:

- 1. Characters, numerals, or symbols misformed (including added or omitted dots)
- 2. Characters, numerals, or symbols omitted or misused or extra ones inserted
- 3. Characters, numerals, or symbols in the number of the problem omitted or misused or extra ones inserted
- 4. Indicators, punctuation marks, composition signs, or the general omission symbol omitted or misused or extra ones inserted
- 5. Spacing errors
- 6. Formatting errors
- 7. Erasures detectable by touch

If you need additional braille paper, notify your exam administrator. When you have completed your final version of the transcription, check the appropriate box at the bottom of the page containing your final version. Your score for this question will be based solely on the version of your transcription that you designate as the final version.

### **Sample Question**

3. Transcribe the following mathematical problems and statements using Nemeth Code. Include all punctuation marks. Skip one line between problems. DO NOT SOLVE ANY OF THE PROBLEMS.

```
1. 7\phi - 4\phi = 3\phi

2. 3/16/2017

3. 54 - 36 = 18

4. \frac{3}{5} \div \frac{4}{7}

5. 8:25 pm

6. 6(9 + 2) = 6 \times 9 + 6 \times 2
```

Answer \_\_\_\_\_

## Producing Nemeth Code with a Braillewriter and Reference Guide

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB and Nemeth Code using a braillewriter.

For this transcription assignment, you will be presented with an additional math worksheet to transcribe into Nemeth Code using a manual (nonelectric) braillewriter. This one will call upon material in the Nemeth Code section of the Reference Guide.

Like the previous Nemeth Code transcription assignment, the worksheet for this question will contain problems and

statements that are representative of the type of material that a TVI may be called upon to transcribe into Nemeth Code for a student who has a visual impairment. Algebra and geometry problems may be included in this question. Note that you are asked only to transcribe the worksheet, not to solve any of the problems.

## Directions

This question involves referring to a Reference Guide in order to transcribe a set of mathematical problems and statements into Nemeth Code. Access the Reference Guide by clicking on the **Reference Materials** icon that appears in the lower left corner of the screen.

Your transcription must be made using a manual (nonelectric) braillewriter that can accommodate the 11<sup>1</sup>/<sub>2</sub>-by-11-inch braille paper provided by the exam administrator. Some of the symbols needed for this assignment can be found in the Reference Guide. Include all punctuation marks. Skip one line between problems. The final version of your completed transcription must fit on one sheet of braille paper.

**Remember:** You are NOT to transcribe this set of mathematical problems and statements into Unified English Braille (UEB); you MUST transcribe them into Nemeth Code. All problem numbers must be brailled in Nemeth Code as well. Do not include any switch indicators in your transcription.

Errors that will be counted as incorrect in your transcription include:

- 1. Characters, numerals, or symbols misformed (including added or omitted dots)
- 2. Characters, numerals, or symbols omitted or misused or extra ones inserted
- 3. Characters, numerals, or symbols in the number of the problem omitted or misused or extra ones inserted
- 4. Indicators, punctuation marks, composition signs, or the general omission symbol omitted or misused or extra ones inserted
- 5. Spacing errors
- 6. Formatting errors
- 7. Erasures detectable by touch

If you need additional braille paper, notify your exam administrator. When you have completed your final version of the transcription, check the appropriate box at the bottom of the sheet containing your final version. Your score for this assignment will be based solely on the version of your transcription that you designate as the final version.

## **Sample Question**

4. Use a braillewriter to transcribe the following mathematical problems and statements into Nemeth Code. Some of the symbols needed for this assignment can be found in the Reference Guide. Transcribe the problems and statements exactly as written. Skip one line between problems. Transcribe all expressions onto the same sheet of braille paper. DO NOT SOLVE ANY OF THE PROBLEMS.

30.5° < 31°</li>
 4(y - ?) = 4y - 8
 △ABC ≅ △DEF
 2<sup>1</sup>/<sub>3</sub> × 9<sup>5</sup>/<sub>8</sub> > 22

## **Reference Guide for Selected Braille Symbols**

The following reference guide will be provided for all transcription assignments.

## Part 1: UEB

Description	Symbol		Example	
Description	Print	UEB	Print	UEB
Ampersand	&	:::::	A & B	
Asterisk	*		Text*	
Bullet	•	::::	<ul><li>Task A</li><li>Task B</li></ul>	
Degree sign	0	: <b>:::</b>	45°	
Equals	=	::::	1 + 1 = 2	
Low-line (underscore)	-		We sawand	

## Part 2: Nemeth Code

	Symbol	l	Example	
Description	Print	Nemeth Code	Print	Nemeth Code
Degree sign	0		45°	
Multiplication dot	•	::	4 · 5	
Less than	<		4 < 5	
Greater than	>		5 > 4	
Mixed number indicators	N/A		$3\frac{4}{5}$	
Triangle	Δ		∆RST	
Square		•	□RSTU	
Angle	۷	••••	∠RST	<b>••••••</b>
Parallel	II		AB    CD	
Perpendicular	T	••••	$AB \perp CD$	
Congruent	≅		$\angle A \cong \angle B$	

	Symbo	I	Example	
Description	Print	Nemeth Code	Print	Nemeth Code
Sign of omission (used to represent a question mark or a space)	N/A	H	5 - ? = 3 or 5 - = 3	
			2x - 5y = 16	
			(3x - 2)(4x + 5)	
Algebraic expressions and equations (5 examples)	N/A		7(x-4) = 7x - 28	
			4 <i>x</i> + 3 = 9	
			5 <i>y</i> – 2 <i>y</i> = ?	

## Score Scales

Your response to each of the transcription assignments will be scored based on the number of transcription errors you make.

The score scale shown below will be used to score the Producing UEB with a Slate and Stylus assignment and the Producing Nemeth Code with a Braillewriter assignment.

Score point	Score Point Description
4	3 or fewer errors
3	4–7 errors
2	8–11 errors
1	12 or more errors
0	Blank or unscorable

The score scale shown below will be used to score the Producing UEB with a Braillewriter assignment and the Producing Nemeth Code with a Braillewriter and Reference Guide assignment.

Score point	Score Point Description
4	2 or fewer errors
3	3–5 errors
2	6–8 errors
1	9 or more errors
0	Blank or unscorable

# Section 5: Sample Transcription Answers Braille (283)

The purpose of this section is to describe the types of transcription questions that you will see on the Braille exam and show the exam directions, sample questions, and the score scales that will be used to score your responses.

## Domain II—Producing Unified English Braille (UEB) and Nemeth Code Producing UEB with a Slate and Stylus

Competency 001—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB using a slate and stylus.

For this section of the exam, you will be asked to use a slate and stylus to transcribe a set of three brief selections into UEB.

The selections are representative of the types of information that a slate and stylus are commonly used to record. Each set of selections includes a name, address, phone number and e-mail address; a shopping list; and a brief note to a student.

## Directions

This question involves transcribing three selections into UEB. Your transcription must be made using a traditional (not direct) 4-line, 27- or 28-cell slate and stylus that can accommodate the 8½-by-11-inch braille paper provided by the exam administrator. You should transcribe each selection exactly as written starting at the left margin. Skip one line between selections. All three selections must be transcribed onto one sheet of braille paper.

The three selections include:

- 1. A name, address, phone number, and e-mail address
- 2. A shopping list
- 3. A note to a student from a teacher

Errors that will be counted as incorrect in your transcription include

- 1. Contractions, indicators, or shortforms omitted or misused
- 2. Characters misformed (including added or omitted dots)
- 3. Characters omitted or extra ones inserted (including hyphenation of words not hyphenated in the text)
- 4. Words omitted or repeated
- 5. Indicators or punctuation marks omitted or misused or extra ones inserted
- 6. Spacing errors (including improper spacing between words, lines, or selections)
- 7. Formatting errors (including improper line breaks or margins)
- 8. Erasures detectable by touch

If you need additional braille paper, raise your hand and notify the exam administrator. When you have completed your final version of the transcription, check the appropriate box at the bottom of the page containing your final version. Your score for this question will be based solely on the version of your transcription that you designate as the final version.

### **Sample Question**

1. Use a slate and stylus to transcribe the following selections into Unified English Braille (UEB). Transcribe the selections exactly as written. Skip one line between selections. Transcribe all selections onto the same sheet of paper.

J. W. Smith 8590 Main Avenue North Austin, Texas 78743 (214) 555-8983 smith99@mail.net

apples bread chocolate milk coffee beans ground beef

Excellent work! Your answer was concise.

#### Answer

## **Producing UEB with a Braillewriter**

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB and Nemeth Code using a braillewriter.

For this section of the exam, you will be presented with a short (80–100 word) passage to transcribe into contracted braille using a manual (nonelectric) braillewriter.

The passage will be representative of the type of instructional material that a teacher of the visually impaired may be called upon to transcribe into braille for a student who has a visual impairment. The passage might contain an analysis of a poem, a description of a scientific process, an assignment related to an English or history unit, directions for a class project, or similar instructional materials.

## Directions

This question involves transcribing a passage into UEB. Your transcription must be made using a manual (nonelectric) braillewriter that can accommodate the 11<sup>1</sup>/<sub>2</sub> -by-11-inch braille paper provided by the exam administrator. Use a 40-cell line and make maximum use of each line. Do not hyphenate words unless they are hyphenated in the text. The final version of your transcription must fit on one sheet of braille paper.

Errors that will be counted as incorrect in your transcription include:

- 1. Contractions, indicators, or shortforms omitted or misused
- 2. Characters misformed (including added or omitted dots)
- 3. Characters omitted or extra ones inserted (including hyphenation of words not hyphenated in the text)
- 4. Words omitted or repeated
- 5. Indicators or punctuation marks omitted or misused or extra ones inserted
- 6. Spacing errors (including improper spacing between words or lines)
- 7. Formatting errors (including improper line breaks and margins)
- 8. Erasures detectable by touch

If you need additional braille paper, notify your exam administrator. When you have completed your final version of the transcription, check the appropriate box at the bottom of the sheet containing your final version. Your score for this question will be based solely on the version of your transcription that you designate as the final version.

## **Sample Question**

2. Use a braillewriter to transcribe the following passage into UEB. Use a 40-cell line and make maximum use of each line. Do not hyphenate words unless they are hyphenated in the text. The final version of your completed transcription must fit on a single sheet of braille paper.

#### Growing Orchids

An interesting hobby that several friends and I have undertaken at home is growing orchids. Orchids are beautiful and, although they appear to be very delicate, they are in fact quite hardy. My favorite and the easiest to grow is Phalaenopsis. They come in a variety of colors and will bloom for months and months at a time! The Phalaenopsis is a low-light orchid, making it a good choice for anyone who does not have a window with direct sunlight. To learn more about growing orchids at home visit the Orchid Growers' Association web site at http://www.orchidgrowers.org/.

Answer

#### 

. :: . . . .... • 11 . . . . . . .... • . H . 8 . н • . . . . . . .... •• H ..... :: 2 . 13 . . . .. . . .. 1 .... . ..... . ... . . ..... ..... 

## **Producing Nemeth Code with a Braillewriter**

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB and Nemeth Code using a braillewriter.

For this transcription assignment, you will be presented with a math worksheet to transcribe into Nemeth Code using a manual (nonelectric) braillewriter.

The worksheet will contain problems and statements that are representative of the type of material that a TVI may be called upon to transcribe into Nemeth Code for a student who has a visual impairment. Note that you are asked only to transcribe the worksheet, not to solve any of the problems.

## **Directions**

This question involves transcribing a set of mathematical problems and statements into Nemeth Code. Your transcription must be made using a manual (nonelectric) braillewriter that can accommodate the 11½-by-11-inch braille paper provided by your exam administrator. Include all punctuation marks. Skip one line between problems. The final version of your completed transcription must fit on a single sheet of braille paper.

**Remember:** You are NOT to transcribe this set of mathematical problems and statements into Unified English Braille (UEB); you MUST transcribe them into Nemeth Code. All problem numbers must be brailled in Nemeth Code as well. Do not include any switch indicators in your transcription.

Errors that will be counted as incorrect in your transcription include:

- 1. Characters, numerals, or symbols misformed (including added or omitted dots)
- 2. Characters, numerals, or symbols omitted or misused or extra ones inserted
- 3. Characters, numerals, or symbols in the number of the problem omitted or misused or extra ones inserted
- 4. Indicators, punctuation marks, composition signs, or the general omission symbol omitted or misused or extra ones inserted
- 5. Spacing errors
- 6. Formatting errors
- 7. Erasures detectable by touch

If you need additional braille paper, notify your exam administrator. When you have completed your final version of the transcription, check the appropriate box at the bottom of the page containing your final version. Your score for this question will be based solely on the version of your transcription that you designate as the final version.

### **Sample Question**

3. Transcribe the following mathematical problems and statements using Nemeth Code. Include all punctuation marks. Skip one line between problems. DO NOT SOLVE ANY OF THE PROBLEMS.

1.  $7\phi - 4\phi = 3\phi$ 2. 3/16/20173. 54 - 36 = 184.  $\frac{3}{5} \div \frac{4}{7}$ 5. 8:25 pm 6.  $6(9 + 2) = 6 \times 9 + 6 \times 2$  Answer

	•	:			•	:	:	•			•	•	•		•	•			:	:	•		.:	ė	•								
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## Producing Nemeth Code with a Braillewriter and Reference Guide

Competency 002—The teacher of students with visual impairments, including those with additional disabilities, knows how to produce UEB and Nemeth Code using a braillewriter.

For this transcription assignment, you will be presented with an additional math worksheet to transcribe into Nemeth Code using a manual (nonelectric) braillewriter. This one will call upon material in the Nemeth Code section of the Reference Guide.

Like the previous Nemeth Code transcription assignment, the worksheet for this question will contain problems and statements that are representative of the type of material that a TVI may be called upon to transcribe into Nemeth Code for a student who has a visual impairment. Algebra and geometry problems may be included in this question. Note that you are asked only to transcribe the worksheet, not to solve any of the problems.

### **Directions**

This question involves referring to a Reference Guide in order to transcribe a set of mathematical problems and statements into Nemeth Code. Access the Reference Guide by clicking on the **Reference Materials** icon that appears in the lower left corner of the screen.

Your transcription must be made using a manual (nonelectric) braillewriter that can accommodate the 11<sup>1</sup>/<sub>2</sub>-by-11-inch braille paper provided by the exam administrator. Some of the symbols needed for this assignment can be found in the Reference Guide. Include all punctuation marks. Skip one line between problems. The final version of your completed transcription must fit on one sheet of braille paper.

**Remember:** You are NOT to transcribe this set of mathematical problems and statements into Unified English Braille (UEB); you MUST transcribe them into Nemeth Code. All problem numbers must be brailled in Nemeth Code as well. Do not include any switch indicators in your transcription.

Errors that will be counted as incorrect in your transcription include:

- 1. Characters, numerals, or symbols misformed (including added or omitted dots)
- 2. Characters, numerals, or symbols omitted or misused or extra ones inserted
- 3. Characters, numerals, or symbols in the number of the problem omitted or misused or extra ones inserted
- 4. Indicators, punctuation marks, composition signs, or the general omission symbol omitted or misused or extra ones inserted
- 5. Spacing errors
- 6. Formatting errors
- 7. Erasures detectable by touch

If you need additional braille paper, notify your exam administrator. When you have completed your final version of the transcription, check the appropriate box at the bottom of the sheet containing your final version. Your score for this assignment will be based solely on the version of your transcription that you designate as the final version.

### **Sample Question**

4. Use a braillewriter to transcribe the following mathematical problems and statements into Nemeth Code. Some of the symbols needed for this assignment can be found in the Reference Guide. Transcribe the problems and statements exactly as written. Skip one line between problems. Transcribe all expressions onto the same sheet of braille paper. DO NOT SOLVE ANY OF THE PROBLEMS.

30.5° < 31°</li>
 4(y - ?) = 4y - 8
 △ABC ≅ △DEF
 2<sup>1</sup>/<sub>3</sub> × 9<sup>5</sup>/<sub>8</sub> > 22

Answer

	ė	-		•		•	:	:•				:•	•						•	•		:	•	•								
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## **Reference Guide for Selected Braille Symbols**

The following reference guide will be provided for all transcription assignments.

## Part 1: UEB

Description	Symbol		Example									
Description	Print	UEB	Print	UEB								
Ampersand	&	:::::::::::::::::::::::::::::::::::::::	A & B									
Asterisk	*	•••	Text*									
Bullet	•	: <b>:</b> : :	<ul><li>Task A</li><li>Task B</li></ul>									
Degree sign	o	::::	45°									
Equals	=	::::	1 + 1 = 2									
Low-line (underscore)	-		We sawand									

## Part 2: Nemeth Code

	Symbol	l	Example								
Description	Print	Nemeth Code	Print	Nemeth Code							
Degree sign	0		45°								
Multiplication dot	•	::	4 · 5								
Less than	<		4 < 5								
Greater than	>	· • • · ·	5 > 4								
Mixed number indicators	N/A		$3\frac{4}{5}$								
Triangle	Δ		∆RST								
Square			□RSTU								
Angle	۷	••••	∠RST								
Parallel	II	<b>:::</b>	AB    CD								
Perpendicular	T	••••	$AB \perp CD$								
Congruent	≅		$\angle A \cong \angle B$								

	Symbo	I	Example	
Description	Print	Nemeth Code	Print	Nemeth Code
Sign of omission (used to represent a question mark or a space)	N/A	H	5 - ? = 3 or 5 - = 3	
			2x - 5y = 16	
			(3x - 2)(4x + 5)	
Algebraic expressions and equations (5 examples)	N/A		7(x-4) = 7x - 28	
			4 <i>x</i> + 3 = 9	
			5 <i>y</i> – 2 <i>y</i> = ?	

## Score Scales

Your response to each of the transcription assignments will be scored based on the number of transcription errors you make.

The score scale shown below will be used to score the Producing UEB with a Slate and Stylus assignment and the Producing Nemeth Code with a Braillewriter assignment.

Score point	Score Point Description
4	3 or fewer errors
3	4–7 errors
2	8–11 errors
1	12 or more errors
0	Blank or unscorable

The score scale shown below will be used to score the Producing UEB with a Braillewriter assignment and the Producing Nemeth Code with a Braillewriter and Reference Guide assignment.

Score point	Score Point Description
4	2 or fewer errors
3	3–5 errors
2	6–8 errors
1	9 or more errors
0	Blank or unscorable