



BRAILLE FORMATS: LET'S KEEP IN SHAPE

FORMATTING: FROM PRINT TO BRAILLE

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INTRODUCTION

FORMATTING: FROM PRINT TO BRAILLE

Having learned the literary braille code through a course of studies, whether that was *Mastering Literary Braille*, or some other instructional program, does not fully prepare anyone for braille production of worksheets, exams or textbook materials. These materials do not just have chapter headings and a story to read. There are major and minor headings. Print page numbers can be important ... tables and lists to produce ... Yes, knowledge and understanding of the literary braille code is essential, but it should only be the first chapter in a large portfolio of tools which will help you produce material in a meaningful, user-friendly format.

Format is a very important factor in braille production. Although accuracy is at the top of the list of priorities in braille production, uniformity in format also ranks high in importance. Since textbooks may be produced by several different agencies, BANA (Braille Authority of North America), whose mission is “to assure literacy for tactile readers through the standardization of braille and/or tactile graphics”, has developed guidelines for all producers to follow. The latest publication is *Braille Formats: Principles of Print-To-Braille Transcription, 2011*. This is available online at www.brailleauthority.org.

Although you, as parents, teachers and teaching assistants, would probably not use these guidelines to any great extent since you are not producing whole textbooks, it is important that you be aware of some of the guidelines. Knowledge of the basics will not only aid the producer in formatting worksheets and teacher-prepared materials in a similar manner as the textbooks, but it will also provide a basis for teaching the student how to “read” textbooks, and how to make use of some of the tools used in the production of braille. Format is designed to ensure compatibility with the print document. Cross-referencing of page numbers, headings, itemized material, inserts and so on are quick and easy. This is essential in our aim to create a fair playing field for the braille-reading student – to put him/her on par with his/her sighted peers.

* Many examples shown in this document have been copied directly from the guidelines of *Braille Formats, Principles of Print-to-Braille Transcription, 2011*.

VOLUME SIZE AND LINE SPACING

Level of braille and volume size is usually specified by the production agency. Their decisions are based on reading level and whether the output is one-sided or interpoint (double-sided).

Volume size is based on the manageability of the finished volume – weight, thickness – i.e. a large amount of tactile graphics would cause reduction in the number of braille pages because of the paper being thicker and heavier.

In general:

1. Pre-school and grade 2 materials are produced in *Uncontracted* (Alphabetic or Grade I) braille, double spaced
2. Grades 2 and higher materials are produced in *Contracted* (Grade II) braille, single spaced
3. Single-sided : approximately 50 braille pages per volume, Grades 1-3
Single-sided: approximately 75-90 braille pages per volume, Grades 4+
4. Materials produced as interpoint (double-sided) braille would of course, be double the pages – preferred 150. Interpoint braille is not usually produced in Alberta.
5. Glossaries, indexes, etc. may be produced in a separate volume for easier reference. If that were the case, this change from print placement would be noted on the Transcriber's Notes page (see Front Matter).

PAGE NUMBERING

BRAILLE PAGE NUMBERING

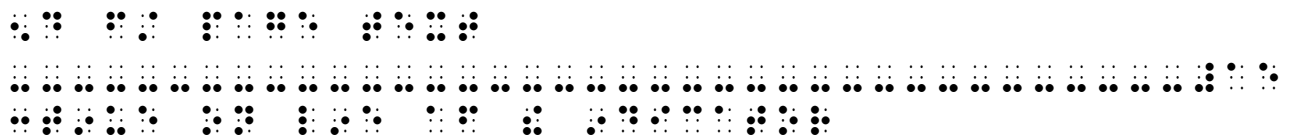
It is customary to number **all** pages in a document on the last line of the braille page at the right margin.

1. These braille page numbers, must be separated from the text by at least 3 blank cells.
2. Begin the main text of each volume with braille page 1.
3. Transcriber generated pages, i.e. Title page or Special Symbols Pages, would be numbered t1, t2, etc. (see Front Matter)
4. Preliminary pages, i.e. Dedication, Glossary, Contents, would be numbered p1, p2, etc. (see Front Matter)

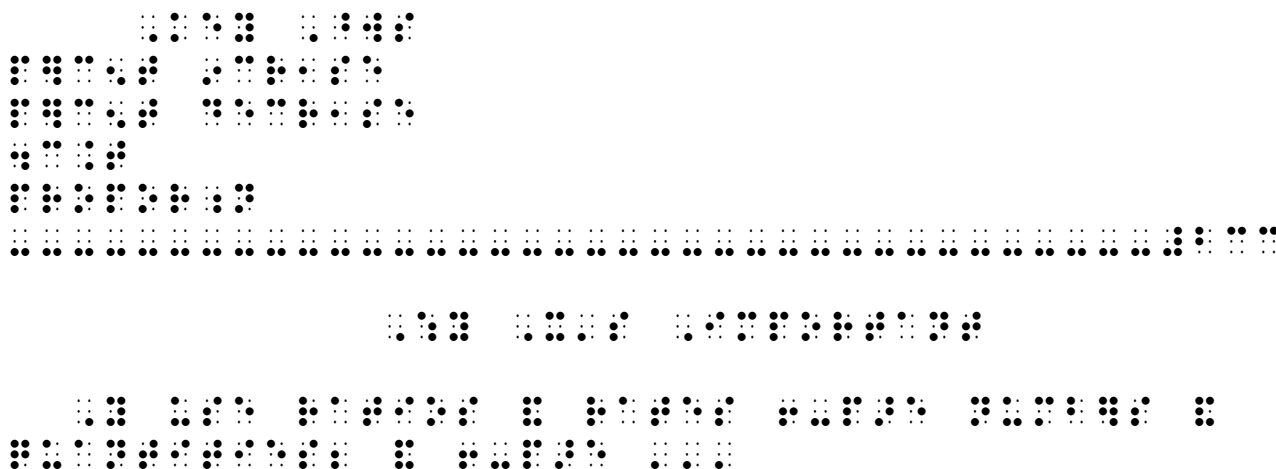
PRINT PAGE NUMBERING

When print page numbers are significant, as in textbooks, it is important to indicate all print page numbers. For example, if the teacher says: "*Turn to page 93.*", he/she is referring to the print page number. The student has to be able to find that page. In braille page numbers, that could be page 67 in a second volume!

1. When a new print page begins at the top of a page, it is placed at the top right of a braille page, in the last cells of the first braille line with no less than 3 blank cells between the page number and the text or running head.
2. When a new print page begins at the middle of a page:
 - a. Begin a new line after the last word of the completed print page (won't necessarily fill a braille line)
 - b. The new print page number would be on the next line, preceded by the *page change indicator* - a line of unspaced ⠆⠆ (36), beginning at the left margin and ending with the new page number at the right margin. No space is left between the page change indicator and the first symbol of the print page number



- c. a print page change indicator does not affect the use of blank lines. Insert a blank line before the indicator if the text ending the print page would normally have a blank line following it or insert a blank line following the print page indicator if the text beginning the new print page would normally have a blank line. If format requires a blank line both before and after the indicator, use only one blank line following the indicator.



- d. begin the new print page on the next braille page when there is not enough room for the new print page indicator and one line of text. If it is followed by a heading, you need room for the blank line before and after the heading and one line of text.
3. Typically, a print page number carries over to more than 1 braille page. This requires the use of a lettered continuation page number. The same page number is repeated at the right margin on each of the continued pages, preceded by a letter – **a** for the first continued page, **b** for the second, and so on. No capital or letter sign is used.

16	a16	b16	a17
45	46	47	48

4. Omitted or combined print pages included in a combined page number. For example, if page 20 was blank, or had only a picture or heading on it, the new print page number would be 20-21. This ensures that all pages are accounted for and lets the reader know that no pages were missed in the transcription. The continued print page number on the next page would then be a21.

16

Unit One
Frogs and Toads

17

Have you ever wondered
what happens to frogs and toads in
the winter?
...
What happens when the
temperature falls?

45

1
2
3
4
5
25

----- New Braille Page -----

1
2

LITERARY PAGE NUMBERING

Some agencies, particularly when producing novels or other materials where reference to print page numbers is not likely to be required, will follow page numbering guidelines as provided in the *"Mastering Literary Braille"* manual. The print page number appears at top left, and the braille page number at top right. The print page number will just be repeated until the next print page has been started. There is no indication of where the next print page actually starts. No page change indicator is used to signify the start of a new print page. This may cause problems, for example, when doing a novel study, where reference to a specific print page is made. The student might need assistance in finding the beginning of that page, but for the most part, materials used just for general reading do not require the specific start and end of a print page. The braille page numbers are simply a running tally.

HEADINGS

(Section 4.1.2 of Braille Formats, Principles of Print-to-Braille Transcription, 2011)
Headings are one of the most important ways a reader obtains information about the print format of material being presented on the braille page. Headings denote hierarchy and by doing a quick finger scan one can quickly move to pertinent sections. A reader who finds blank space at the margin will check to see what it means; will quickly check the current line (usually to about the middle) to see if something is indented on that line, check the following line, or possibly do a quick scan of the next several lines, to see if the general indent pattern has changed – say from a paragraph to a list.

Print books, worksheets and handouts use various methods to distinguish headings: different fonts and font sizes, color, placement. Effort should be made to achieve the same type of structure in braille. It is important to be consistent in the treatment of similar print headings throughout the entire transcription.

Within any document there will likely be headings. Are they major or minor? How will each be dealt with in braille? The transcriber makes these decisions.

HEADING HEIRARCHY

Headings may be placed on line one of the braille page if a running head is not used. If a running head is used, a heading is placed on line 3. This follows the rule that a heading must have a blank line before it – this is true even following a page change indicator.

Headings must be followed by at least one line of text on the braille page.

1. Centred headings – represent the print headings of major sections of the text
2. Cell-5 and Cell-7 Headings – represent the print headings of sub-sections of the text
3. Paragraph headings – usually an emphasized word or phrase at the beginning of a paragraph

RUNNING HEAD

Note that the Running Head, appears on the first line of every page, and although it is a ‘heading’, it is not part of the hierarchy of headings and subheadings that sets the relationship between sections within a document.

A running head might be the title of the book being produced, the title of a worksheet or some other identifying name you come up with that might be used to identify pages belonging to the same document – a way of “keeping it together”. Most production agencies use it. It is not a must, but is usually preferred when there are quite a few braille pages relative to one document.

1. The full title of a document should appear on the title page and the first page of text in every volume of braille. It may require more than one braille line and must be followed by a blank line.
2. The same running head appears on the first line of every page, except the title page and the first page of text in each volume where the full title is required.
3. A blank line is not required after the running head unless the formats for text following it call for one, i.e. centred or minor headings, lists, etc. require a blank line preceding them.
4. The running head is centred, leaving at least three blank cells at both the beginning of the line and before the print page number. It may be necessary to omit some capitalization or to abbreviate some of the words in the heading to make it fit within the allowed number of cells.
5. The same running head must appear on all pages, so it is necessary to be sure how many cells the longest print page number might need, taking into consideration the letter for continued pages, and the number of digits in the page number. For example, page a100 would need 5 cells for the page number.

CENTRED HEADINGS (Main heading)

1. A centred heading must have a minimum of 3 blank cells at the left, and at the right margin.
2. Long headings should be balanced and divided at a logical location.
3. A centred heading must be preceded and followed by a blank line except:
 - a. no blank line between a centred heading and a related box
 - b. must be preceded, but not followed by a blank line in a table of contents
 - c. no blank line following alphabetic divisions, such as in an index or glossary

CELL-5 HEADINGS (Subheading)

1. A cell-5 heading is preceded by a blank line.
2. The heading is blocked in cell 5.
3. The heading is usually not followed by a blank line, and takes precedence over the use of blank lines in other formats, i.e. lists.
4. The heading would be followed by a blank line if columned material followed.
5. A cell-5 heading cannot be followed by a centred heading.
6. Two equally important cell-5 headings may be together with no blank line between.
7. A cell-5 heading may be followed by a related cell-7 heading with no blank line between.

CELL-7 HEADING (Sub-subheading)

1. The heading is preceded by a blank line.
2. The heading is blocked in cell 7.
3. The heading may be preceded by a cell-5 heading – no blank line between.
4. The heading is usually not followed by a blank line. Exception: when followed by columned material.
5. The heading cannot be followed by a centred heading, a cell-5 heading or a cell-7 heading.

PARAGRAPH HEADING





1. A paragraph heading introduces the focus of a paragraph
2. The heading is typically an emphasised word or phrase, emphasized by font, i.e. boldface, italics, underline, etc. at the beginning of the paragraph.
3. The transcriber might want to extract this heading and convert it to a cell-5 or cell-7 heading if it would make it easier for the reader to locate.

FONTS

A font attribute (typeface) is a unique characteristic of a font, e.g. italics, bold, underline. These are quite often just for visual affect to attract a reader's attention. In braille, these may be ignored when they are used only for decorative purposes and do not add information for the reader, e.g. headings, dedications captions, etc. For recreational reading, font attributes do not need to be distinguished. The italic indicator can be used for all typefaces.

However, font attributes must be retained to give the braille reader an accurate rendition of the print text, i.e. when they add meaning to the text or are referenced elsewhere.





Italics and boldface indicators: three words or less are marked individually while passages of more than three words are identified by opening and closing double italic or bold indicators.

-  single italic indicator
 double italic indicator
 boldface indicator
 double boldface

The sun will soon have **disappeared** behind a cloud.

The figure consists of 12 sub-diagrams labeled (a) through (l). Each diagram shows a collection of points arranged in a grid-like pattern. (a) is a single point. (b) through (l) show the grid expanding and becoming more complex, with points arranged in rows and columns, illustrating the concept of a 2D grid.

Other symbols: underlining, color, or words enclosed in shaped. These indicators are placed before the emphasized text and ended by a termination indicator following the last word. Each indicator must be preceded and followed by a space. Some examples are:

-  underline
-  blue
-  rectangle (box)
-  termination indicator

It's snowingoutside. The street is wet.

The figure consists of 10 sub-diagrams arranged horizontally, each showing a 5x5 grid of dots. The dots are black, and their positions change from one diagram to the next, illustrating a sequence of states or a process. The sequence starts with a single dot in the top-left corner (1,1) and progresses through various configurations, including clusters and paths, ending with a more complex, interconnected pattern.

EXAMPLE TRANSCRIPTION

RESPONDING TO LITERATURE

Skill Minilessons

GRAMMAR AND LANGUAGE • PRECISE VERBS

Good writers use precise, or exact, verbs to make their writing fresh and believable. Many verbs have synonyms, so writers must choose the verb that most precisely describes a particular character, setting, or action. For example, James Herriot writes, "I left [Mrs. Tompkin] still nodding and smiling and, cage in hand, fled into the street." *Fled* expresses the action and emotion better than *walked* or *ran* might.

PRACTICE Revise the following sentences by substituting a precise verb for each underlined word or phrase.

1. The bull pushed Mr. Herriot against the wood partition.
2. The bird moved away as Mr. Herriot reached for it.
3. Mr. Herriot left the house to get another bird.
4. Mr. Almond was frustrated with Mr. Herriot.
5. After a day of close calls, Mr. Herriot's head hurt.

VOCABULARY • ANALOGIES

An **analogy** is a type of comparison that is based on the relationships between things or ideas. Some analogies, like the one below, are based on a relationship that could be called "degree of intensity."

warm : hot :: attractive : gorgeous

You could describe the degree of intensity in the example like this: "Something very warm is hot, just as something very attractive is gorgeous."

PRACTICE Figure out the relationship between the first pair of words. Then complete the analogy by choosing a second pair that has the same relationship.

1. unfortunate : catastrophic ::
 - a. lucky : unlucky
 - b. cheerful : pleasant
 - c. afraid : terrified
 - d. embarrassed : quiet
 - e. large : heavy
2. vast : infinite ::
 - a. good : perfect
 - b. spacious : roomy
 - c. tiny : huge
 - d. necessary : sufficient
 - e. old : wise

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line1 –book title, *RESPONDING TO LITERATURE* – running head - centred

line 1 – print page number 111

lines 3 – main heading – Skill Minilessons – centred, blank line before and after

lines 5-6 – minor headings combined, blocked in cell 5 (5/5) . Second heading is distinguished by use of emphasis (italic) indicator. line 7 – blank line before cell-5 heading but not following

lines 7-11 – explanatory paragraph blocked at the margin as in print

lines 13-15 – directions for exercise following, title PRACTICE is part of the paragraph directions, all blocked in cell 5 (5/5) – blank line before directions (line 12), but not following

lines 16-20 – list of exercise items (1/3)

line 16 – note underline and termination indicators – pushed

line 25 – first of consecutive page numbers

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 - b. cheerful : pleasant
 - c. afraid : terrified
 - d. embarrassed : quiet
 - e. large : heavy
2. vast : infinite ::
 - a. good : perfect
 - b. spacious : roomy
 - c. tiny : huge
 - d. necessary : sufficient
 - e. old : wise

- 1
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- 25

line 1 – running head, continuation page number **a111**

lines 3-4 – minor headings separated to two lines, both blocked in cell 5 (5/5) – first could have been in cell 5 and the second in cell 7 – no blank line between cell-5 and/or cell-7 headings when one immediately follows the other

line 10 – displayed text – adjust left margin 2 cells to the right, leave a blank line before and after

line 10 – note analogy symbols $\ddot{:} \ddot{:}$ (: - is to) and $\ddot{:} \ddot{:}$ (:: - as) – same as mathematical signs of comparison

lines 16-19 – directions – separated the title PRACTICE as a cell-5 heading from the paragraph directions to make it easier to locate if scanning for similar exercises – all still blocked in cell 5

lines 20-25 – nested list

line 25 – consecutive braille page 2

ICONS

1. In print, icons may be used to draw attention to specific activities or text, e.g a pencil to indicate a writing assignment, or a clock to identify an activity which might be timed.
2. Equivalent symbols would be devised using the shape indicator $\ddot{\cdot}$ (dots 1246), unspaced before letters that might apply to the icon, e.g. $\ddot{\cdot}\ddot{\cdot}$ for a pencil, $\ddot{\cdot}\ddot{\cdot}\ddot{\cdot}$ for a clock.



Write an essay. Describe ...

3. Icon symbols should be identified to the reader and noted on the Special Symbols page.

FRONT MATTER

Until the 2011 updates to the *Braille Formats*, all of the pages at the beginning of the volume were called p-pages (preliminary). These pages contain valuable information which is often overlooked by the student. This can cause confusion and a lack of understanding of the material presented. They are a valuable tool for the braille reader.

With the updates, these beginning pages were separated into **transcriber-generated** (t-pages) and **preliminary pages** (p-pages).

TRANSCRIBER-GENERATED PAGES

Transcriber-generated pages, have no corresponding print page numbers. The transcriber summarizes the following:

- source information – copyright, printing history
- descriptions and definitions of symbols which might be unfamiliar to the reader
- codes used
- changes made to the print format

There is no equivalent print page number for this information. Braille page numbers are preceded by a **t**, e.g., t1, t2, etc. The pages are transcribed in the following order:

1. **Title page** – provides, as required by copyright law, title, author and publisher, as well as the volume information such volume number, print and braille pages in each volume.
2. **Second title page(s)** – (in first volume only) lists information that will not fit on the title page, i.e. list of authors or editors,
3. **Special Symbol page** – lists a variety of symbols including those made up by the transcriber and others not familiar to the reader for example
 - transcriber-devised symbols, e.g. icons, shape indicators
 - Computer Braille Code symbols
 - pronunciation symbols
4. **Transcriber's Notes page** – identifies special formats or usage throughout the volume, for example
 - This edition has been transcribed according to the rules of *Braille Formats, Principles of Print to Braille Transcription, 2011*. Or
 - Mathematical formulas are transcribed according to *The Nemeth Braille Code for Mathematics and Science Notation, ...*
 - Double quotation marks are substituted for single quotation marks.
 - Answers are moved from the back of the book to the end of the chapter to which they apply.
 - Back cover information is provided on page p1.

PRELIMINARY PAGES

Preliminary pages follow the transcriber-generated pages. Some books have many preliminary pages, and others have very few or none at all. Braille page numbers are preceded by a **p**, e.g. p1, p2, etc., and include a print page number. Print page numbers may be implied (unnumbered), Roman numerals or Arabic.

Preliminary pages could include:

- front and back cover information
- dedications
- acknowledgements
- table of contents

With the exception of the contents pages, preliminary pages are only provided in the first volume of a production. The full table of contents is shown in the first volume only. Subsequent volumes list only the contents included in that specific volume.

LISTS

Lists can be presented in many formats in print. Braille tries to follow that whenever possible. In general,

1. Lists are preceded and followed by a blank line in most situations.
2. A list is not preceded by a blank line:
 - a. when it follows a cell-5 or cell-7 heading
 - b. when it follows directions
 - c. when it follows a top boxing line
3. The 2011 update to the *Braille Formats* have introduced special symbols to represent bullets and dashes used to highlight each item in a list. These symbols would be listed on the Special Symbols page in the t-pages at the beginning of each volume in which they appear
 - a. ⠠⠠ primary bullet (i.e. solid dot)
 - b. ⠠⠠ secondary bullet (i.e. hollow dot)
 - c. ⠠⠠ hyphen or dash

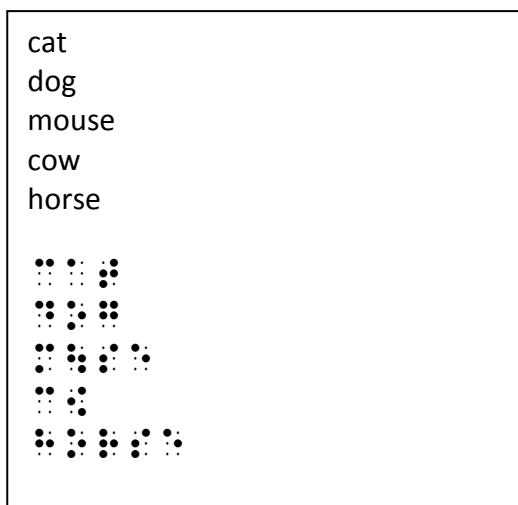
Other symbols can be devised by the transcriber to represent unique bullets, but would be listed on the Special Symbols page, or identified to the reader in some way.

4. Runover for all entries or subentries in a list is two cells to the right of the farthest indentation.

SIMPLE VERTICAL LIST

- Simple vertical listing – no subentries
- Each item is in 1/3

Example:



TWO-COLUMN LIST

- First column begins in cell 1
- Two blank cells are left between the longest item in the first column and the left-hand margin of the second column

Example:

Alberta	Prince Edward Island
British Columbia	Quebec
Manitoba	Saskatchewan
New Brunswick	Northwest Territories
Newfoundland	Yukon Territory
Nova Scotia	Nunavut
Ontario	

The figure shows a 10x10 grid of dots. The dots are arranged in a pattern that suggests a banded structure, with a higher density of dots along the main diagonal and some off-diagonal elements, particularly in the upper right quadrant.

TWO-COLUMNED LIST CHANGED TO VERTICAL

- A multi-columned (more than one column) list can be changed to a vertical single-columned list.
- If present, retain alphabetic or numeric order.

Example: Note the use of bullet symbols.

This is his wish list from the Louis L'Amour collection. Bulleted items are out of stock.

- *Bowdrie*
- *Chancy Flint*
- *The Lonely Men*
- *Radigan The Skyliners*

Figure 1. The 26 letters of the alphabet in Braille.

The figure consists of a 4x4 grid of 16 small plots, each showing a different spatial pattern of points. The patterns are as follows:

- Row 1:
 - Plot 1: A small cluster of 4 points.
 - Plot 2: A small cluster of 4 points.
 - Plot 3: A small cluster of 4 points.
 - Plot 4: A small cluster of 4 points.
- Row 2:
 - Plot 1: A small cluster of 4 points.
 - Plot 2: A small cluster of 4 points.
 - Plot 3: A small cluster of 4 points.
 - Plot 4: A small cluster of 4 points.
- Row 3:
 - Plot 1: A small cluster of 4 points.
 - Plot 2: A small cluster of 4 points.
 - Plot 3: A small cluster of 4 points.
 - Plot 4: A small cluster of 4 points.
- Row 4:
 - Plot 1: A small cluster of 4 points.
 - Plot 2: A small cluster of 4 points.
 - Plot 3: A small cluster of 4 points.
 - Plot 4: A small cluster of 4 points.

NESTED LISTS

A nested list is a list with main entries and at least one level of subentries. These entries may be itemized or not – may contain numbered items, lettered items, bullets, etc. Nested lists are always transcribed in a single column.

Outlines, worksheets and exams are most often in some kind of list format. This is particularly obvious in multiple choice questions.

- The main entry begins in cell 1.
- Each subentry begins two cells to the right of the previous level.
- All runovers begin two cells to the right of the farthest indented subentry.
 - One level: 1/3
 - Two levels: 1/5, 3/5
 - Three levels: 1/7, 3/7, 5/7
 - Four levels: 1/9, 3/9, 5/9, 7/9

Example: Simple Nested List

Apple Inc.

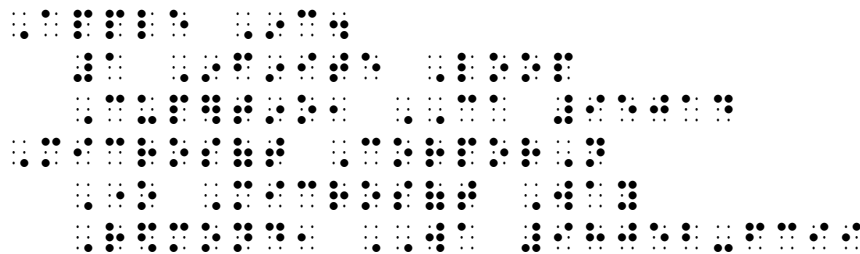
1 Infinite Loop

Cupertino, CA 95014

Microsoft Corporation

One Microsoft Way

Redmond, WA 98052-6399



Example: Columned List Changed to Vertical Nested List

BIRDING BASICS		
Size	Shape	Behavior
Small	Body shape	Foraging
Medium	Bill Shape	Flight
Large	Head and neck shape	Perching
	Legs and tail shape	Nesting
		Vocal

Example: Nested List – Itemized and Bulleted Entries

Note runover to cell 9

A. Background of 1893 Columbian Exposition

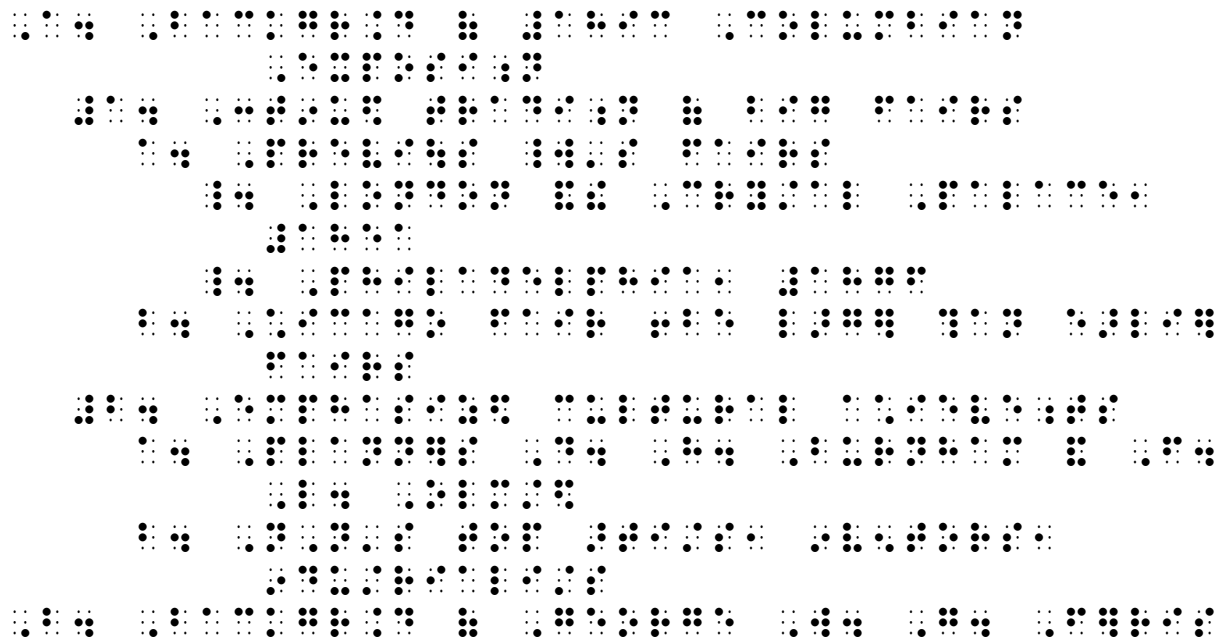
1. Continued tradition of big fairs

- a. Previous world's fairs
 - London and the Crystal Palace, 1851
 - Philadelphia, 1876
- b. Chicago fair to be larger than earlier fairs

2. Emphasized cultural achievements

- a. Planners D. H. Burnham and F. L. Olmsted
- b. Nation's top artists, inventors, industrialists

B. Background of George W.G. Ferris



TRANSCRIBER'S NOTES

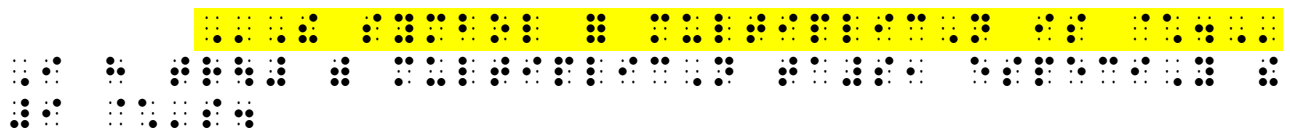
Any wording not shown in the print text and inserted by the transcriber is treated as a transcriber's note. Transcriber's notes are used to explain a change in format, describe pictures, note omitted material, etc. and provide the reader with important information. The notes within regular text would apply only to specific information immediately following that note. Notes which are applicable throughout the text should be included in the transcriber-generated Transcriber's Note page, thereby eliminating the need to repeat the same note numerable times.

Changes in format from print to braille are also explained in a transcriber's note.

1. Notes should be as brief as possible, placed before the text to which it refers.
2. Use of a full sentence is not necessary in all notes.
3. Sentence structure and word choice is dictated by the grade level of the material being transcribed.
4. Most transcriber notes are in 7/5 or embedded within the text.
5. The unspaced transcriber's note indicator ⠠⠶⠢⠶⠶ (6, 3) begins and ends the note.
6. No blank lines precede or follow the note unless required by other formats, e.g. headings, lists, poetry, etc.

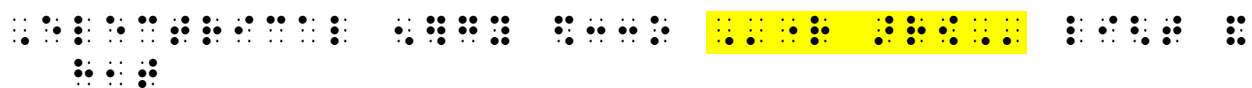
Example: Standard Transcriber's Note

I have trouble with multiplication tables, especially the 9 x's.



Example: Embedded Transcriber's Note

Electrical Energy \rightarrow light and heat



DIRECTIONS

Directions are followed by specific question/answer types of questions or activities in a book. It is preferred that the directions be on the same page as the related questions. The following applies to transcription using the Literary braille code

1. Directions must have a blank line before them except when they follow a cell-5 or cell-7 heading.
2. Directions are blocked in cell 5.
3. Where there is more than one paragraph in the directions, the first is blocked in cell 5, with the remainder in 7/5.
4. It is not necessary to leave a blank line following cell 5 directions.
5. It is ideal to have directions and questions on the same braille page, but when this is not possible, in order of preference.
 - a. If all of the activities fit on one page, the directions can be on one page and the activities on the next.
 - b. When all the activities do not fit on one page, the activities may start on the same page as the directions. At least one complete question must be shown before a braille page break.
6. It is preferable to have the questions and all answer choices for a question on the same page.

Example:

Write each sentence. Draw one line under the adjective. Draw two lines under the noun it describes.

1. The chalkboard is green.
2. Sometimes the erasers are dusty.
3. Our chalk is new.

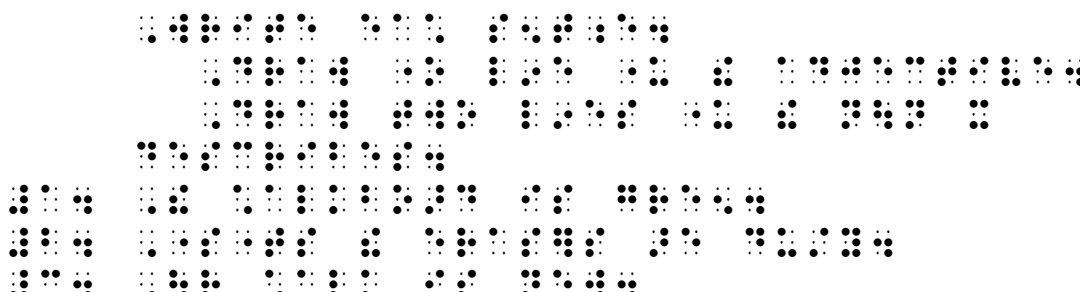
Example: Directions with three paragraphs.

Write each sentence.

Draw one line under the adjective.

Draw two lines under the noun it describes.

1. The chalkboard is green.
2. Sometimes the erasers are dusty.
3. Our chalk is new.



TABLES

“A table is an orderly arrangement of data, usually in which the data are arranged in columns and rows.” Print format is reflected in the transcription to braille whenever possible. It is usually easy to find a particular column in a print table. In braille, this ease of reading works only if each entry will fit on one line.

Alternate formats are used when columns have runover that is too lengthy and it is difficult to move follow from one column to another. Clarity and intended use of the information presented must be considered when choosing an alternate format.

PARTS OF A TABLE

Column Headings: headings across the top of a table.

- Immediately precede their respective columns
- Limited to two lines
- Left justified within the column
- Guide dots are not used between column headings
- All column headings end on the same line

Separation Line: horizontal line separating the column heading and the column entries.

- Dot 5 followed by a series of dots 2-5 (⠠ ⠠ ⠠ ⠠ ⠠)
- Length is determined by the longest entry within the column – could be an entry or the column heading
- Columns are separated by two blank cells

Row Headings: first column and may or may not have a column heading.

- Brailled in 1/3
- If there are Row subheadings, main heading is in 1/5 with subheading in 3/5
- Limited to two lines
- Guide dots follow row headings as needed
- Column entries begin on the same line the row heading ends.

Column Entries: intersections of a row and a column.

- Limited to two lines
- Numerals aligned by place value in print are similarly aligned in braille, i.e. align digits, decimals, commas
- Guide dots follow column entries as needed.
- Follow print for omissions indicated in print by a dash (⠠ ⠠) or an ellipsis (⠠ ⠠ ⠠).
- Two or more dot 5s across the width of a column indicates the column entry is blank. This should be noted in a Transcriber's Note before the table.

Guide Dots: a series of dot 5's leading the reader from the entry in one column to the next.

- Insert two or more guide dots as needed to fill out the column with shorter entries.
- One space separates the end of the entry from the guide dots lead the reader to the next column entry. A minimum of 3 cells are needed to the end of column before you would insert guide dots.
- No guide dots following the entry in the last column since there is no additional columns to lead the reader to.

	Column Heading	
	Column Subheading	Column Subheading
Row Heading	Entry	Entry
Row Subheading	Entry	Entry
Row Heading	Entry	Entry

Tables have a relationship between columns and rows. Entries are compared with entries in other columns and rows to analyze data.

Example: Simple Table (Note use of boxing lines is optional)

Animal	Longest Life Span
mosquito	30 days
gorilla	50 years
elephant	65 years

Braille representation of the Simple Table example. The table is represented using Braille characters for the words and numbers, with appropriate spacing and boxing lines to indicate the table structure.

Related columns show a relationship between entries across a row of columns but no relationship between entries in one row with entries in another row. Basically, there is no row heading.

Example: Related columns (Note the use of guide dots)

Infinite	Past	Past Participle
awake	awoke	awoken
be	was, were	been
bear	bore	born
beat	beat	beat

Braille representation of the Related columns example. The table is represented using Braille characters for the words and numbers, with appropriate spacing and boxing lines to indicate the table structure. The use of guide dots is noted in the example.

SHORTENING COLUMN WIDTHS

In an effort to maintain columns and rows in a similar format to print, there are a few shortcuts that can be made.

- Abbreviate headings
- Use known acronyms
- Upper case letters may be converted to lower case
- Font attributes can be ignored (i.e. italics)
- Devise a key for long entries – two to three cells, with at least one of the letters containing a dot 1 or 3
- Transcriber's notes must be inserted before the tables to:
 - Explain any entries that are not easily identifiable from context
 - List any keys that have been devised

WIDE TABLES

When the techniques for shortening column width don't create enough additional space to fit the table within the width of the 40 cells of the braille page, alternate formats can be used. Keep in mind that readability is more important than space.

Vertical Division:

- Repeat row headings
- Insert transcriber's note:

Table is divided vertically into 2 sections.

Example: (note alignment of decimals in the first column.)

Unionized Manual Workers						
	1900	1910	1920	1930	1940	1950
Denmark	13.9	16.2	37.0	33.8	44.3	54.4
Sweden	8.7	12.2	32.4	41.7	64.3	75.2
Norway	10.3	14.6	35.9	43.2	67.9	77.3
Finland	6.9	10.3	25.6	34.7	44.2	52.1

Figure 1 displays a 5x5 grid of 25 small plots, each showing a different state of a system over time. The plots are arranged in a grid, with the top row showing a uniform state and the bottom row showing a highly complex, noisy pattern. The plots are arranged in a grid, with the top row showing a uniform state and the bottom row showing a highly complex, noisy pattern.

The image is a 10x10 grid of dots. The first two columns contain a stylized '10'. The next three columns contain three identical '4's. The remaining columns contain a long horizontal bar of dots at the bottom row.

Interchange Columns and Rows:

- Use only if clarity of the table is maintained
- Insert a transcriber's note:

Columns and rows are interchanged.

Example: (same table as the previous table which was divided vertically)

Unionized Manual Workers						
	1900	1910	1920	1930	1940	1950
Denmark	13.9	16.2	37.0	33.8	44.3	54.4
Sweden	8.7	12.2	32.4	41.7	64.3	75.2
Norway	10.3	14.6	35.9	43.2	67.9	77.3
Finland	6.9	10.3	25.6	34.7	44.2	52.1

The figure consists of two rows of six dot patterns each. The top row shows a progression from a single dot on the far left to a single dot on the far right. The bottom row shows a progression from a single dot on the far left to a single dot on the far right, with intermediate patterns showing the dot moving from left to right.

Stairstep Table Format

- Limited to 4 columns
- Columns cannot be combined
- A Transcriber's note is required, followed by a blank line (a list needs a blank line before it.)

Table changed as follows(7/5)

Heading of first column (1/1)

Heading of second column (3/3)

Heading of third column (5/5)

- First column of each row is in 1/1, second column is 3/3, third column in 5/5 and fourth column is in 7/7
- All columns in a row are on the same braille page if possible

Example:

Where were you during the Vietnam War?	How old were you during the war?	How did the war affect Americans	What memories do you have
I signed up for the Marines and served in Cambodia.	I was 18 when I signed up.	There was a lot of protesting against the war.	There are some I don't want to talk about.
Oklahoma City, Oklahoma	I was 10 when it ended.	I don't remember too much about it. I do remember my grandmother being worried.	I remember the news on TV almost every evening.

A large, complex, abstract black and white pattern resembling a stylized, dense forest or a highly textured surface. The pattern is composed of numerous small, interconnected shapes, creating a sense of depth and complexity. The overall shape is roughly rectangular, with a slightly irregular top edge and a solid black bottom edge.

LINE-NUMBERED TEXT

Line numbering is seen most frequently with poetry and plays, but it is used also for referencing a specific line or paragraph for discussion or activities in prose. You quite often find this in exams when a question might refer to a word or phrase in an insert or example.

In general, line numbers in either the left or right margins in print:

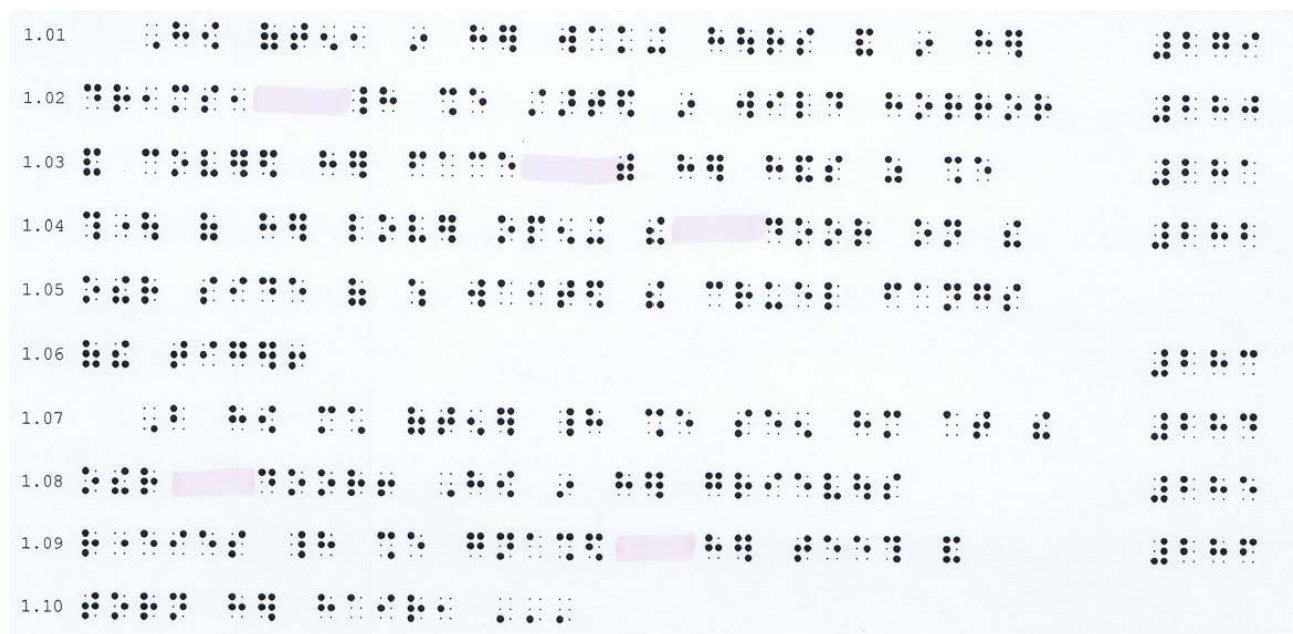
1. may not appear on any line with a print or braille page number
2. the line number is transcribed so that it ends at the right margin on which the print line begins
3. text ends so that at least two blank cells separate the text and the longest line number on the braille page

LINE-NUMBERED PROSE

1. Follow print for indented or blocked paragraphs
2. Number every print line of prose even if not all lines are numbered in print
3. Three blank cells precede a new print line when it begins in the middle of a braille line

280 How often, in her waking hours and in her dreams,
 had she started in wild horror and covered her face
 with her hands as she thought of her lover opening the
 door on the other side of which waited the cruel fangs
 of the tiger!

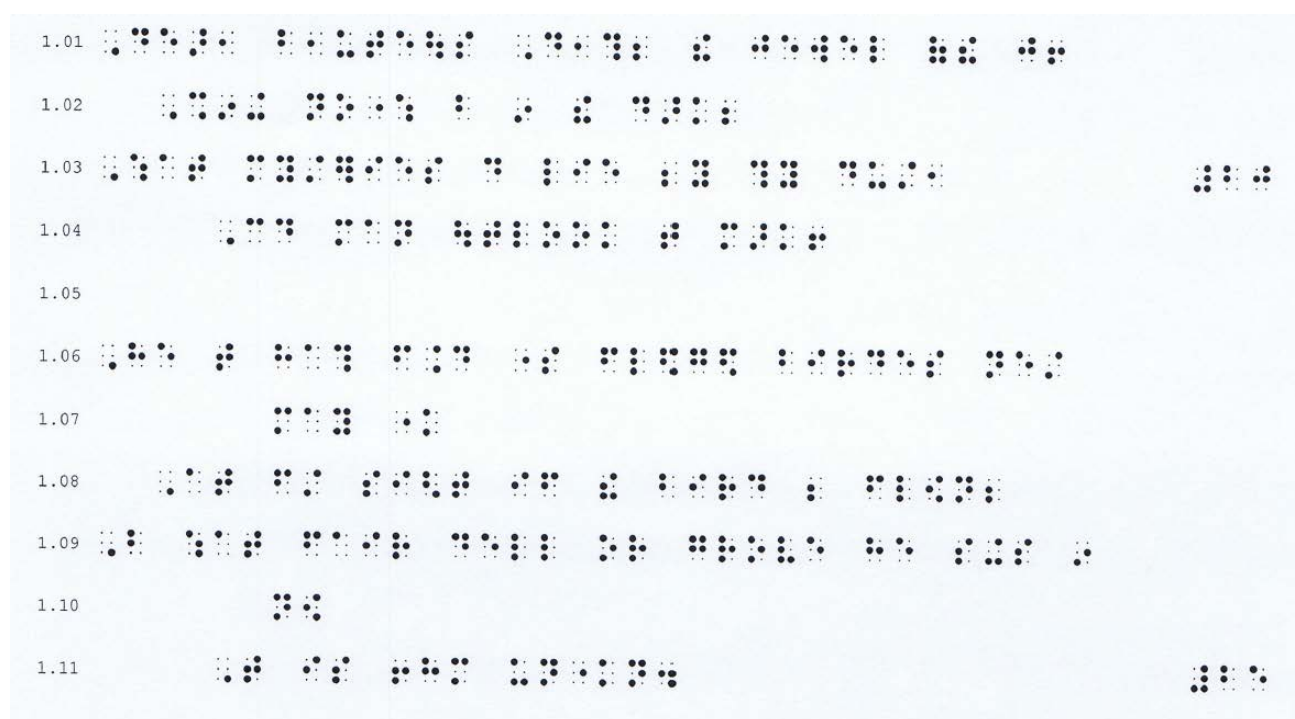
285 But how much oftener had he seen him at the other
 door! How in her grievous reveries had she gnashed
 her teeth and torn her hair, ...



LINE NUMBERED POETRY

1. Use poetry format
2. Only the line numbers shown in print are indicated in braille
3. The two-cell margin before print line numbers is maintained whether the numbers are implied or actually shown

Dear, beauteous Death; the jewel of the just!	
Shining nowhere but in the dark;	
What mysteries do lie beyond thy dust,	20
Could man outlook that mark!	
He that hath found some fledged birdes nest may know	
At first sight if the bird be flown;	
But what fair dell or grove he sings in now,	
That is to him unknown	25



EXPENDABLE BRAILLE

(CONSUMABLE)

Expendable, or consumable braille – that which is disposable after one use – is produced in a format which leaves extra space for a student to braille directly on the worksheet, thereby keeping questions and answers on the same page. This is helpful for study purposes, and often saves the student time by eliminating the need to copy text before giving an answer, for example, a math question in spatial format. The margin for error in recopying, particularly in math, decreases through the use of consumable materials.

In general, materials follow the same formatting guidelines as permanent materials with a few modifications. The most significant is the space being left for answers. Because the materials are most often produced for one individual, the producer must keep the needs and skill of the individual student in mind. What works for one does not always work for another.

Due to “individual-specific” preferences, it is seldom that an agency will produce braille in a consumable format. The bulk of the work a production agency prepares must be suitable for multiple users.

SUMMATION

Braille Formats: Principles of Print to Braille Transcription, 2011, provides the guidelines and recommendations made by BANA (Braille Authority of North America). BANA's mission: "to assure literacy for tactile readers through the standardization of braille ...". These guidelines are extensive and can be overwhelming. This overview is just the tip of the iceberg, but should still provide enough of the basics to create an awareness of the importance of good, consistent format, as well as the knowledge to:

- provide materials using consistent and standard format, and
- provide instruction as to how they can make good use of that format.

An awareness and understanding of the format guidelines in the early grades ensures that students will be able to read and search out information easily because they know:

- t-pages and p-pages include important information
- where to find print page numbers
- the significance of centering and indentation, and how this is useful in finding major and minor headings
- a Transcriber's Note gives important information. It provides clarification and/or an explanation of what is different or omitted from print in the braille copy
- how to read a table

The student is able to do his/her work more efficiently and accurately because the work is presented in appropriate format, and that format is consistent whether produced by an agency or within the school setting.

General Purpose Symbols

This appendix was prepared by the BANA Literary Technical Committee.

Punctuation

Braille	Print	Meaning
⠠	,	comma
⠤	;	semicolon
⠒	:	colon
⠨	.	period
⠆	!	exclamation point
⠑	?	question mark
⠨	' '	apostrophe
⠠⠠⠠	...	ellipsis
⠠	-	hyphen
⠠⠠	—	dash
⠠⠠⠠⠠	— —	double dash
⠠	.	decimal point (within a number)
⠠	/	fraction line (within a number)

Signs of Measurement

Braille	Print	Meaning
⠠⠠	°	degrees
⠠⠠	'	single prime meaning foot or feet
⠠⠠	'	single prime meaning minutes of arc
⠠⠠	"	double prime meaning inches
⠠⠠⠠	"	double prime meaning seconds of arc

Signs of Enclosure

Braille	Print	Meaning
⠠⠠	" "	opening double quotation mark
⠠⠠	" "	closing double quotation mark
⠠⠠	' '	opening single quotation mark
⠠⠠	' '	closing single quotation mark
⠠	()	opening or closing parenthesis
⠠⠠	[]	opening bracket
⠠⠠	[]	closing bracket
⠠⠠	<	opening angle bracket
⠠⠠	>	closing angle bracket
⠠⠠	{ }	opening brace
⠠⠠	{ }	closing brace

Mathematical Signs

Braille	Print	Meaning
⠠⠠	+	plus
⠠⠠	-	minus
⠠⠠⠠	±	plus or minus
⠠⠠	×	multiplication, times
⠠⠠	÷	division
⠠⠠	=	equal
⠠⠠⠠	≠	not equal
⠠⠠	>	greater than
⠠⠠	<	less than
⠠⠠	:	ratio, is to
⠠⠠	∴	proportion, as
⠠⠠	∵	because
⠠⠠	∴	therefore
⠠⠠	∅	null or empty set

Currency Signs

Braille	Print	Meaning
⠠⠠	¢	cents
⠠	\$	dollar sign before a number
⠠⠠	\$	dollar sign elsewhere
⠠	£	pounds sterling sign before a number
⠠⠠	£	pounds sterling sign elsewhere
⠠⠠	€	euro
⠠⠠	¥	yen

Nonalphabetic Signs

Note: The asterisk, dagger and double dagger are used in regular text; see reference marks for use with footnotes.

Braille	Print	Meaning
⠠⠠	@	at sign (2007)
⠠⠠	&	ampersand
⠠⠠	#	crosshatch (2007)
⠠⠠	/	slash
⠠⠠⠠	//	double slash
⠠⠠⠠	%	percent
⠠⠠	*	asterisk
⠠⠠	†	dagger
⠠⠠	‡	double dagger
⠠⠠	¶	paragraph
⠠⠠	§	section
⠠⠠		vertical bar
⠠⠠		double vertical bar
⠠⠠	©	copyright (2007)
⠠⠠	®	registered trademark (2007)
⠠⠠	™	trademark (2007)
⠠⠠	✓	check mark
⠠⠠	"	ditto
⠠⠠	?	question mark standing alone
⠠⠠	•	primary bullet (2011)
⠠⠠	◦	secondary bullet (2011)