

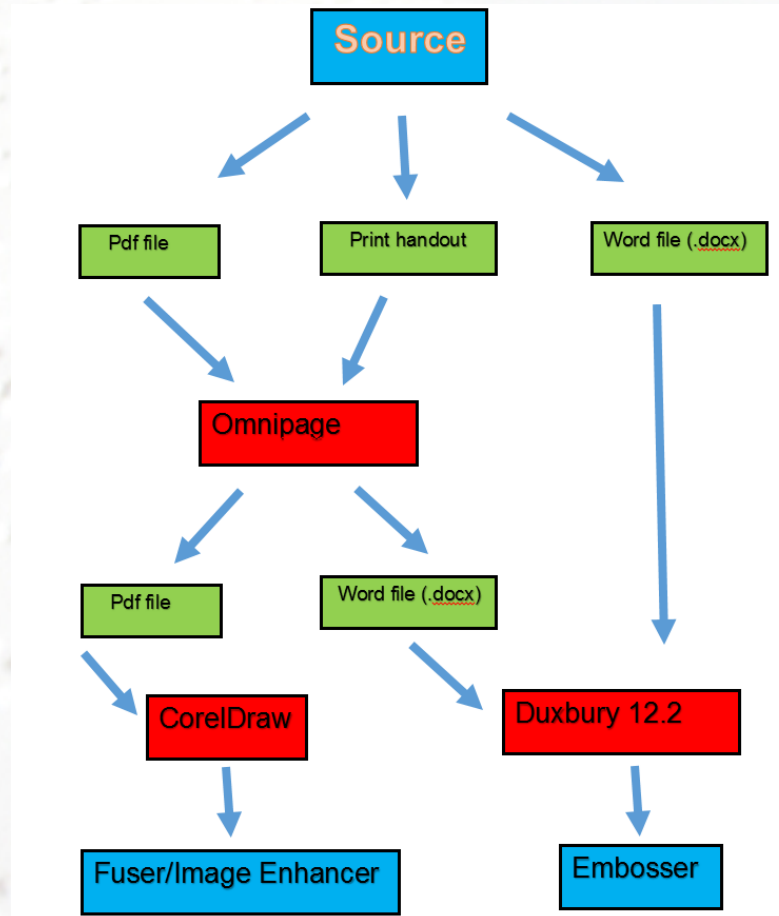
Braille Production

Duxbury Translation Software

Duxbury Presentation

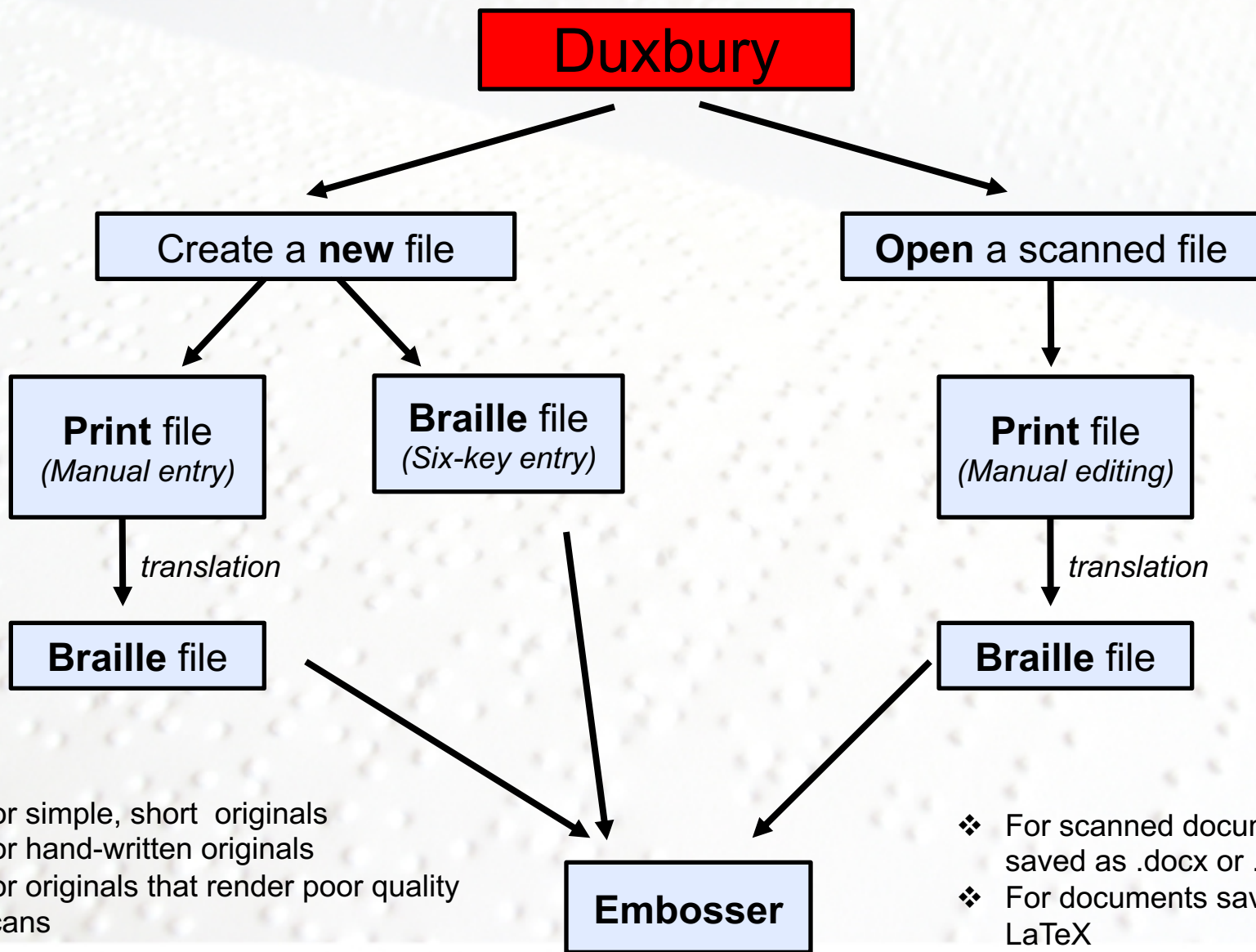
- How and where Duxbury fits into the braille production flow
- How to create a new Duxbury document
- How to import a scanned document
- How to use editing features
- How to use formatting features
- How to prepare for embossing or printing
- Working with Microsoft Word 2016
- Transcription of
 - Math material
 - Foreign language material
- Resources

Duxbury within the Work Flow



Duxbury
Presentation

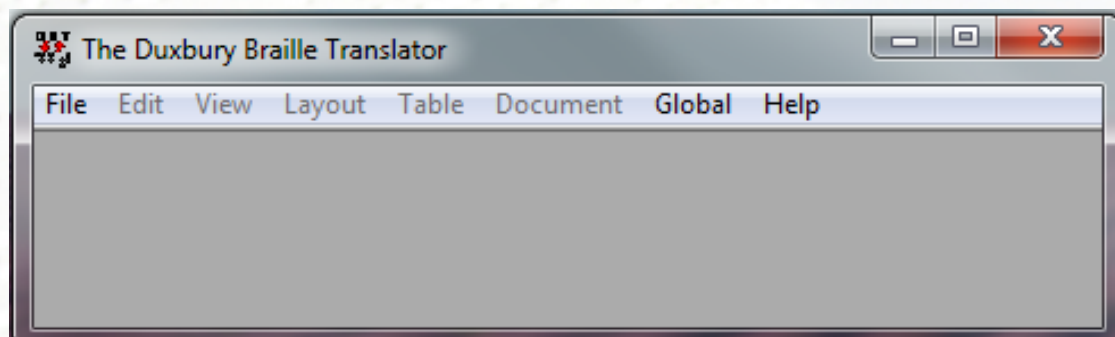
continued
→



- ❖ For simple, short originals
- ❖ For hand-written originals
- ❖ For originals that render poor quality scans

- ❖ For scanned documents saved as .docx or .doc
- ❖ For documents saved as LaTeX

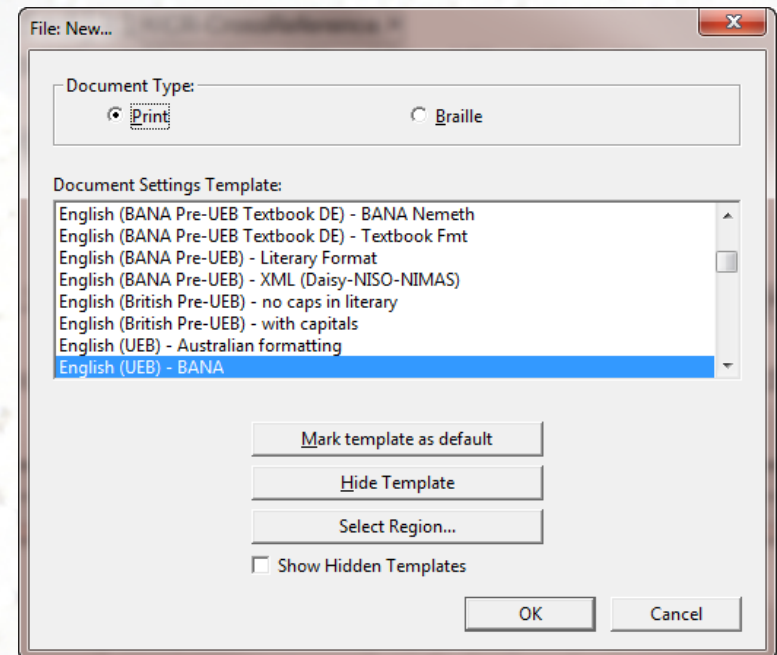
Opening Duxbury (12.2)



- Duxbury 12.2 has eight menus on its toolbar, each of which, when selected, brings up another set of menus
- At this point, “File”, “Global” and “Help” menus are active
- Global options: allow for general set-up of embosser and printer
- File options: create new file or open an existing file

How to Start a New Document

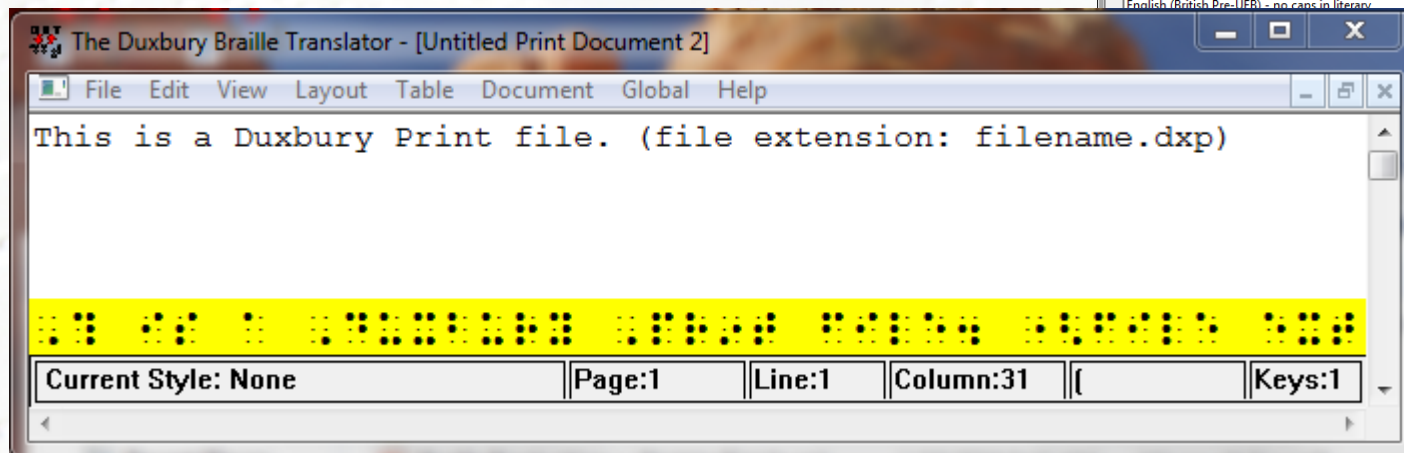
- Go to “File” menu on the toolbar and select “New” or use the shortcut command Ctrl-N.
- There are two Document Type choices: Print or Braille
 - Print option: manual entry in print, then translate into braille
 - Braille option: manual six-key entry
- If working in UEB, choose
 - “English (UEB) - BANA” as your template and set it as default template by clicking on “Mark template as default”.
- If working in EBAE, choose a
 - “English (BANA Pre-UEB)” template.



continued →

What a print file window looks like

→ 1. Toolbar: all menus are activated.



→ 2. Translation line

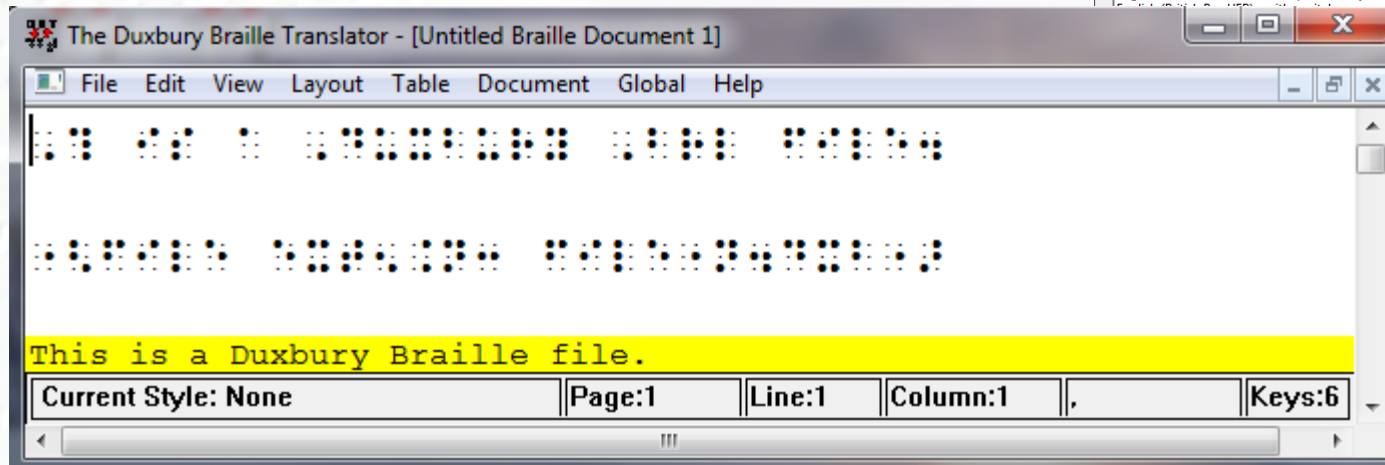
- The highlighted translation line shows the braille equivalent of the print line at the point of the cursor location.
- To activate the translation line, go to “View” menu on the toolbar and click on “Translated Line” or press Ctrl-F8.

→ 3. Status bar:

- ❑ Current Style: formatting style of the line where cursor is located
- ❑ Page: current braille page number
- ❑ Line: line where cursor is located
- ❑ Column: cell where cursor is located
- ❑ Info about text
- ❑ Keys: 1 (for print file); 6 (for braille file)

What a braille file window looks like

→ 1. Toolbar: all menus are activated.



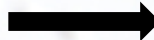
→ 2. Six-key entry

- Go to “View” menu on the toolbar and click on “Six-Key Entry” or press F2

→ 3. Translation line

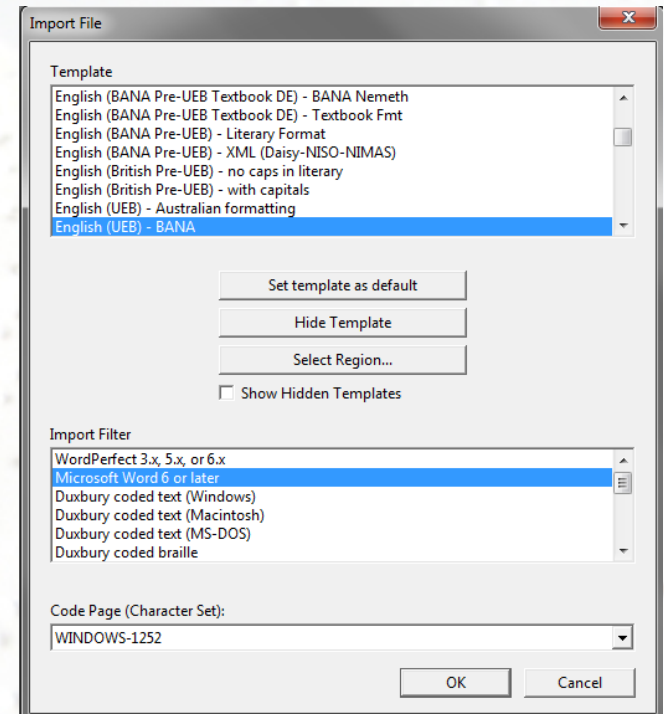
- The highlighted translation line shows the print equivalent of the braille line at the point of the cursor location
- To activate the translation line, go to “View” menu on the toolbar and click on “Translated Line” or press Ctrl-F8

continued



How to Import a Scanned Document (.docx or .doc file)

- Duxbury does not recognize Rich Text File or plain text file. A scanned file needs to be saved as either .doc or .docx (for Duxbury 12.1 and higher) for importing.
- Go to “File” menu on the toolbar and select “Open” or use the shortcut command Ctrl-O.
- Select the intended filename and click “Open”. A dialogue box will appear for template options.
- Template: if working in UEB, choose
 - “English (UEB) - BANA” as your template and set it as default template by clicking on “Mark template as default”.
- Template: if working in EBAE, choose a
 - “English (BANA Pre-UEB)” template.



Example Worksheet

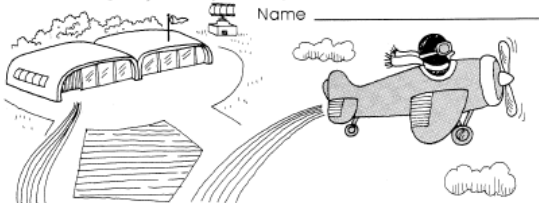
Original Worksheet



Imported into Duxbury

You're (To, Too, Two) Much! homophones

Name _____



Use a dictionary to help you determine the correct homophones to circle in each sentence.

1. The ten (rose, rows) bushes are planted in two (rose, rows).
2. The pilot left his (hangar, hanger) in the (hangar, hanger).
3. The (prince, prints) left his (prince, prints) all over the paper.
4. Mr. Miller (overseas, oversees) all the (overseas, oversees) shipments.
5. How much do I need to (earn, urn) before I have enough money to buy the (earn, urn)?
6. The (coward, cowered) (coward, cowered) in the corner when the police arrived.
7. How much (tacks, tax) will I pay on this box of (tacks, tax)?
8. (Weave, We've) joined a class to learn how to (weave, we've).
9. It was (passed, past) seven o'clock by the time Charlie (passed, past) the dessert.
10. I was (board, bored) with painting the (board, bored) fence.

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File Edit View Layout Table Document Global Help

homophones

You're (To, Too, Two) Much!

Name _____

11

Use a dictionary to help you determine the correct homophones to circle in each sentence.

1. The ten (rose, rows) bushes are planted in two (rose, rows).
2. The pilot left his (hangar, hanger) in the (hangar, hanger).
3. The (prince, prints) left his (prince, prints) all over the paper.
4. Mr. Miller (overseas, oversees) all the (overseas, oversees) shipments.
5. How much do I need to (earn, urn) before I have enough money to buy the (earn, urn)?
6. The (coward, cowered) (coward, cowered) in the corner when the police arrived.
7. How much (tacks, tax) will I pay on this box of (tacks, tax)?
8. (Weave, We've) joined a class to learn how to (weave, we've).
9. It was (passed, past) seven o'clock by the time Charlie (passed, past) the dessert.
10. I was (board, bored) with painting the (board, bored) fence.

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18
IF5023

Vocabulary Enrichment

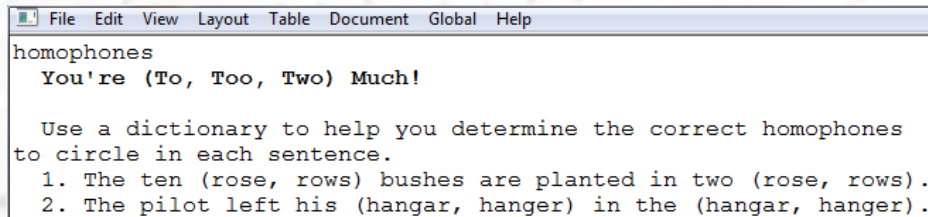
- The scanned original (.doc) opened in Duxbury
- Opens automatically as Duxbury print file
- This is where editing and proofreading should be done
- Formatting can be done here or after translation into braille file

In this demonstration formatting is shown in the print file.

Formatting a Document Using Styles and Codes

- For formatting, Duxbury **Codes** and **Styles** are used.
- In the **Standard View**, **Codes** and **Styles** cannot be seen.
- In order to see the **Codes**, go to “View” menu on the toolbar and click on “Codes” or press ALT-F3.
- This will change the appearance of the document from **Standard View** to **Coded View**

Standard View

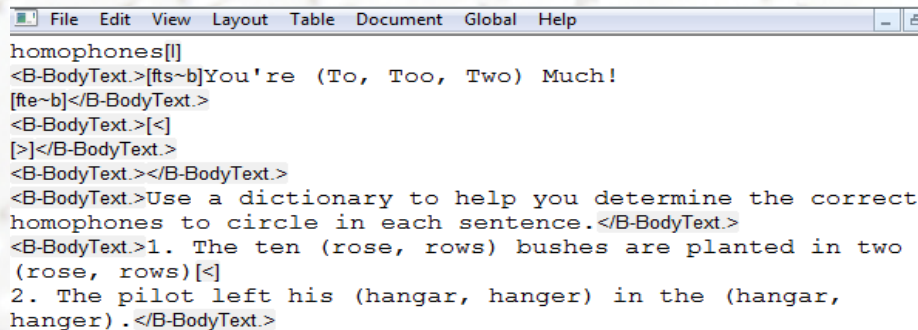


homophones
You're (To, Too, Two) Much!

Use a dictionary to help you determine the correct homophones to circle in each sentence.

1. The ten (rose, rows) bushes are planted in two (rose, rows).
2. The pilot left his (hangar, hanger) in the (hangar, hanger).

Coded View



```
homophones[]  
<B-BodyText>[fts~b]You're (To, Too, Two) Much!  
[fte~b]</B-BodyText>  
<B-BodyText>[<  
[>]</B-BodyText>  
<B-BodyText></B-BodyText>  
<B-BodyText>Use a dictionary to help you determine the correct  
homophones to circle in each sentence.</B-BodyText>  
<B-BodyText>1. The ten (rose, rows) bushes are planted in two  
(rose, rows)[<  
2. The pilot left his (hangar, hanger) in the (hangar,  
hanger) .</B-BodyText>
```

- Alt-F3 allows you to toggle between **Coded** and **Standard View**.

View	Layout	Table	Document	Global	He
	Full-Page				
<input checked="" type="checkbox"/>	Print Font				Ctrl-F5
	Braille Font				Ctrl-F6
	SimBraille Font				Ctrl-F7
	Six-Key Entry				F2
<input checked="" type="checkbox"/>	Codes				Alt-F3
	Translated Line				Ctrl-F8
<input checked="" type="checkbox"/>	1 Untitled Print Document 1				

Note: the codes in this example are imported from the word document and will need to be replaced with codes for braille formatting (see next slide)

continued
→

- **Codes** are written within []. **Styles** have an opening and an ending code.

```
File Edit View Layout Table Document Global Help
[lea]14[<]
[hds]THE SEA[hde]
[<]
[p]Day broke over a gray and dismal world. The canoe lifted and
fell idly on the glassy swells. Mafatu looked back over his
shoulder, searching the horizon for a last glimpse of Hikcueru;
but the atoll had vanished, as if to hide itself forever from
his concern.
```

- Before applying a new **Style** or **Code**, you need to come out of the previous style by moving the cursor past the ending code of the style. Using arrow keys on the keyboard, the cursor can be moved out of a **Style**.

Cursor within a code

```
File Edit View Layout Table Document
[<]
<Directions.>Directions:</Directions.>
<E-Exercise.>1. Exercise </E-Exercise.>
<E-Exercise.>2. Exercise</E-Exercise.>
```

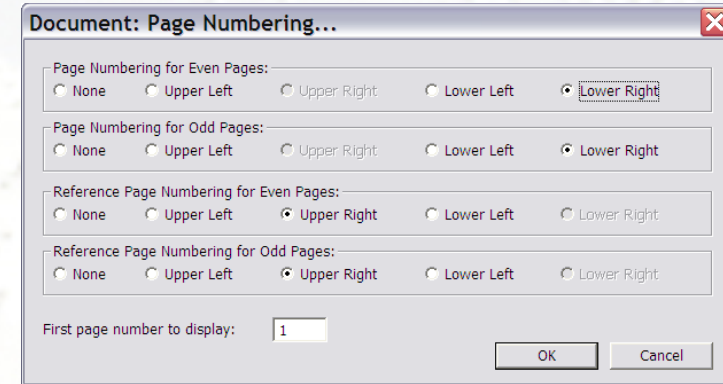
Cursor moved out of code.
A new code is applied.

Use arrow key on
keyboard to move
cursor out of code

```
File Edit View Layout Table Document
[<]
<Directions.>Directions:</Directions.>
<E-Exercise.>1. Exercise </E-Exercise.>
<E-Exercise.>2. Exercise</E-Exercise.>
```

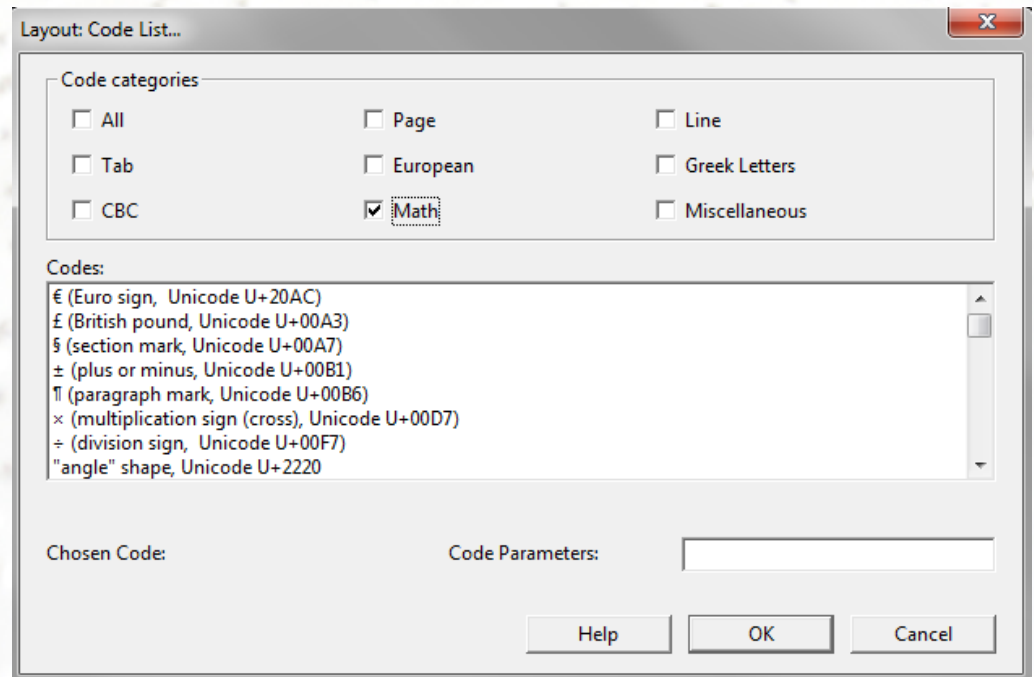

How to set up braille page numbers and print page numbers

- Placement of page numbers
 - When using a template, you don't need to do this setup. It is already setup for you.
 - Textbook format: print page number (Reference page) in upper right corner, braille page number in lower right corner.
 - If settings need to be changed: go to "Document" menu on the toolbar, click on "Page Numbering..." and enter settings.
- Braille page numbers:
 - Go to "Layout" menu on the toolbar and "Set Page Number" and choose "Arabic"
 - Braille page numbers will be inserted automatically
- Print page numbers:
 - Page numbers need to be inserted at the point where they occur in the text, using a code.
 - Print page number code is [lea], followed by print page number
 - There are three ways to enter the code [lea]
 1. Go to "Layout", select "Page Codes: New Reference Page"
 2. Use the shortcut key, Alt-Enter
 3. Use shortcut key F9 or Ctrl-[and type lea
 - The print page number needs to follow the code [lea]. → [lea]1



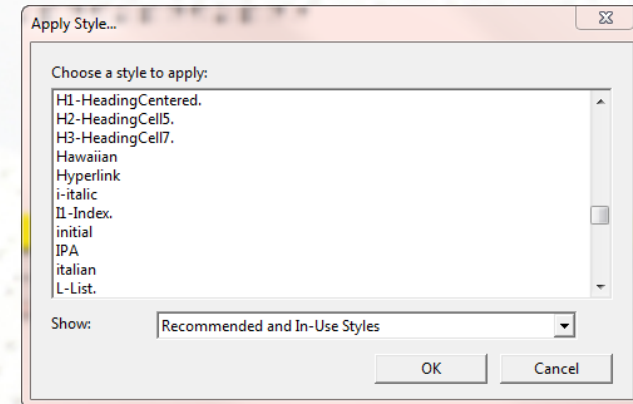
List of Codes: F5 Key

- To access a list of codes, go to “Layout” menu on the toolbar and choose “Code List...” or use the **F5** Key
- Code category “All” displays the entire list of codes
- By choosing a specific Code category, the list is shortened to display codes pertaining to the chosen category.



List of commonly used Styles: F8 Key

- To access a list of styles, go to “Layout” menu on the toolbar and choose “Apply Style...” or use the **F8** Key
- These are some commonly used styles:
 - **Headings:** The style “H1” is for use as a major heading, style “H2” is for cell 5 heading and style “H3” is for cell 7 heading. Major headings are centered, and minor headings are indented at cell 5 or cell 7.
 - **Directions:** Directions are indented to cell 5, with runover lines at cell 5.
 - **List:** A list should start in cell 1, with runover in cell 3 (1/3). A list should have a blank line before and after it.
 - **Beginning and ending boxing lines:** Use “BB-BoxBegin” for top boxing line and “BE-BoxEnd” for bottom boxing line. “BD-BoxDouble” inserts a full cell boxing line.
 - **Transcriber’s Notes:** The first line should be set at cell 7, with runover lines at cell 5. The transcriber’s note indicators (@.< @.>) are inserted at the beginning and at the end of the note.
 - **Styles 1-3, 3-5 ... :** Text starts in cell 1 with runover in cell 3 if the 1-3 style is selected. Text starts in cell 3 with runover in cell 5 if the 3-5 style is selected.
 - **Typeform indicators:** bold, italics, underline



Formatting the Example Worksheet

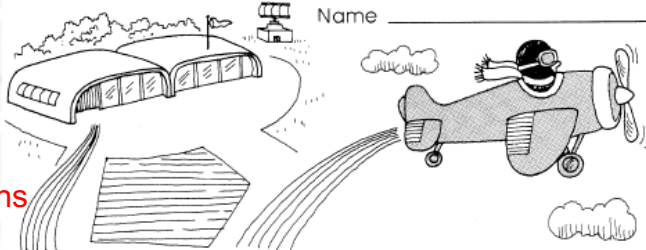
Worksheet title:
centered heading

Chapter title:
centered heading

You're (To, Too, Two) Much!

homophones

Name _____



Directions

Use a dictionary to help you determine the correct homophones to circle in each sentence.

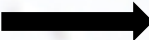
1. The ten (rose, rows) bushes are planted in two (rose, rows).
2. The pilot left his (hangar, hanger) in the (hangar, hanger).
3. The (prince, prints) left his (prince, prints) all over the paper.
4. Mr. Miller (overseas, oversees) all the (overseas, oversees) shipments.
5. How much do I need to (earn, urn) before I have enough money to buy the (earn, urn)?
6. The (coward, cowered) (coward, cowered) in the corner when the police arrived.
7. How much (tacks, tax) will I pay on this box of (tacks, tax)?
8. (Weave, We've) joined a class to learn how to (weave, we've).
9. It was (passed, past) seven o'clock by the time Charlie (passed, past) the dessert.
10. I was (board, bored) with painting the (board, bored) fence.

Numbered
exercises

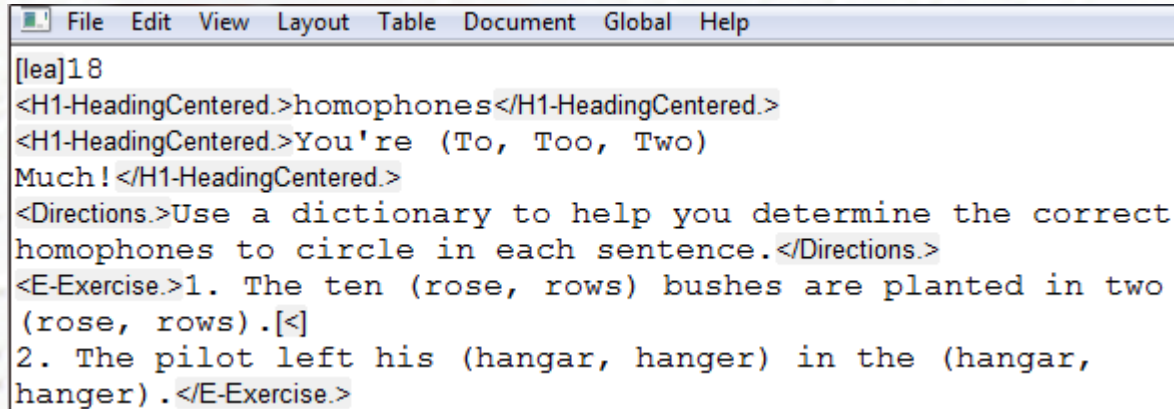
Braille formatting is shown in red.
Braille styles:

- Print Page Number → page code [lea]
- Chapter title → Centered Heading style
- Worksheet title → Centered Heading style
- Directions → beginning in cell 5 with run-overs in cell 5 (5/5) or Direction style
- Numbered exercises → each beginning in cell 1 with run-overs in cell 3 (1/3) or Exercise style
- Items not transcribed in consumable materials: Name, footer information

continued



Formatted example document in *Coded View*

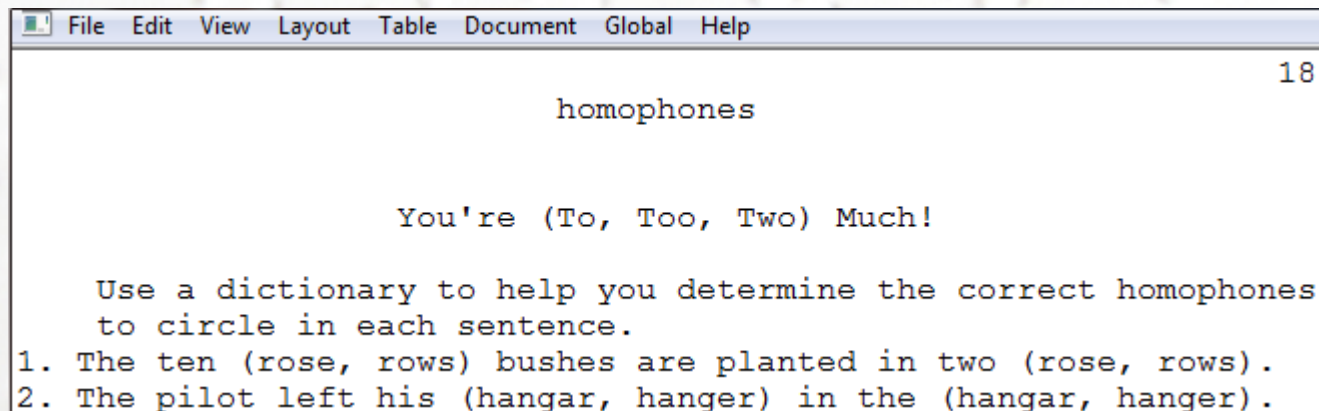


[lea]18
<H1-HeadingCentered.>homophones</H1-HeadingCentered.>
<H1-HeadingCentered.>You're (To, Too, Two)
Much!</H1-HeadingCentered.>
<Directions.>Use a dictionary to help you determine the correct
homophones to circle in each sentence.</Directions.>
<E-Exercise.>1. The ten (rose, rows) bushes are planted in two
(rose, rows).[<]
2. The pilot left his (hangar, hanger) in the (hangar,
hanger).</E-Exercise.>



Press Alt-F3

Formatted example document in *Standard View*



18

homophones

You're (To, Too, Two) Much!

Use a dictionary to help you determine the correct homophones
to circle in each sentence.

1. The ten (rose, rows) bushes are planted in two (rose, rows).
2. The pilot left his (hangar, hanger) in the (hangar, hanger).

Translating and Saving a Document

Translating:

- To translate, go to “File” menu on the toolbar and “Translate” or Ctrl-T
- The default setting is translation into fully contracted braille
- Other translation options will be covered later

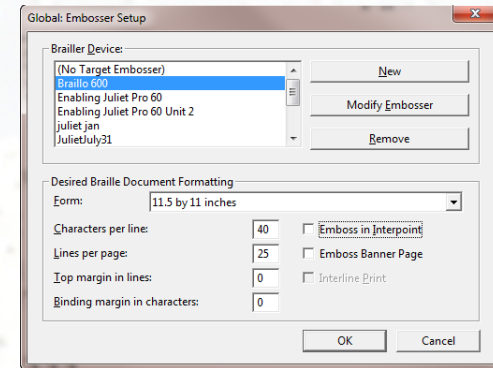
Saving:

- To save, go to "File" menu on the toolbar and "Save" or use Ctrl-S
- Print file is saved as .dxb file.
- Braille file is saved as .dxb. file. The braille file can also be saved as a .brf file.

Embossing and Printing a Document

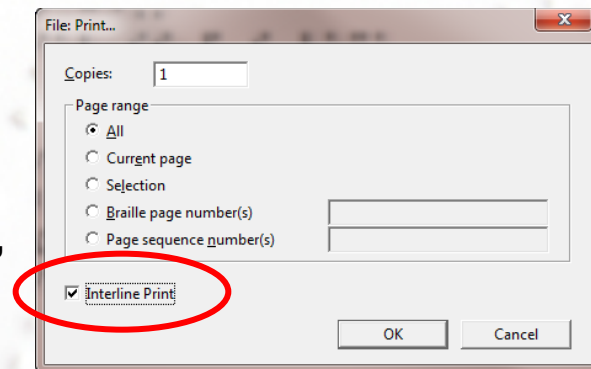
Embossing:

- To set embossing configuration for your embosser, such as paper size, number of cells per line and number of lines per page, go to “Document” menu on the toolbar and choose “Embosser Setup”
- To emboss, go to “File” menu on the toolbar and “Emboss...” or press Ctrl-E



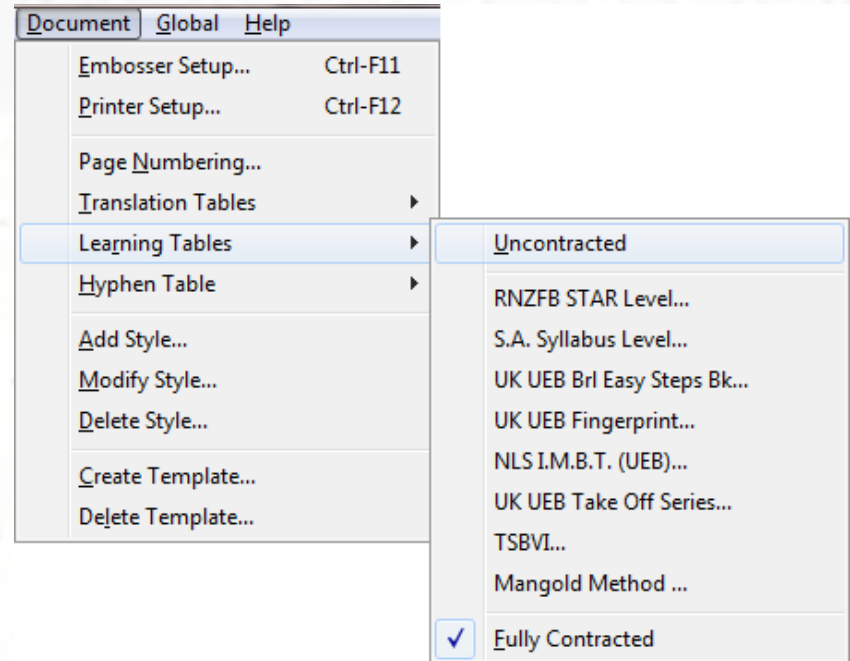
Printing:

- To set printer configuration, such as paper orientation, size, go to “Document” menu on the toolbar and choose “Printer Setup”
- It is also possible to print Simbraille with interlined print. Go to “File” menu on the toolbar, “Print ...” and click the box “Interline Print”



Translation Options

- The default setting for translation is “Fully contracted”
- To change this, go to “Document” menu on the toolbar and choose “Learning Tables” for a dropdown menu of choices, such as “Uncontracted”
- For translations using only specified contractions, select the braille teaching course and lesson number being used. Note: the courses displayed will be strictly dependent on what initial template has been selected.
 - For Example: **NLSI.M.B.T.** learning table (with **BANA** template) Lesson 4.2 will only use contractions for alphabetic word signs (but, can, do, etc.)
 - For information on which contractions are used in different braille course lessons, go to “Help” menu on the toolbar, “Help Topics...”, “Learning tables”.

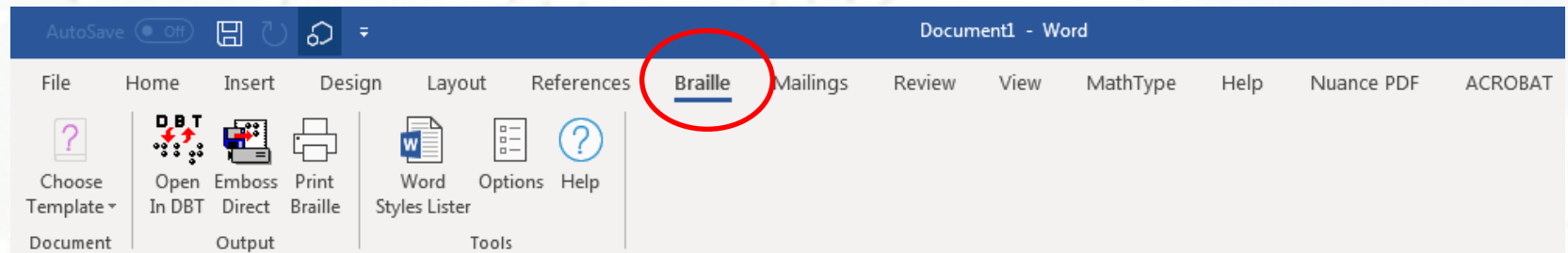


Shortcut Keys

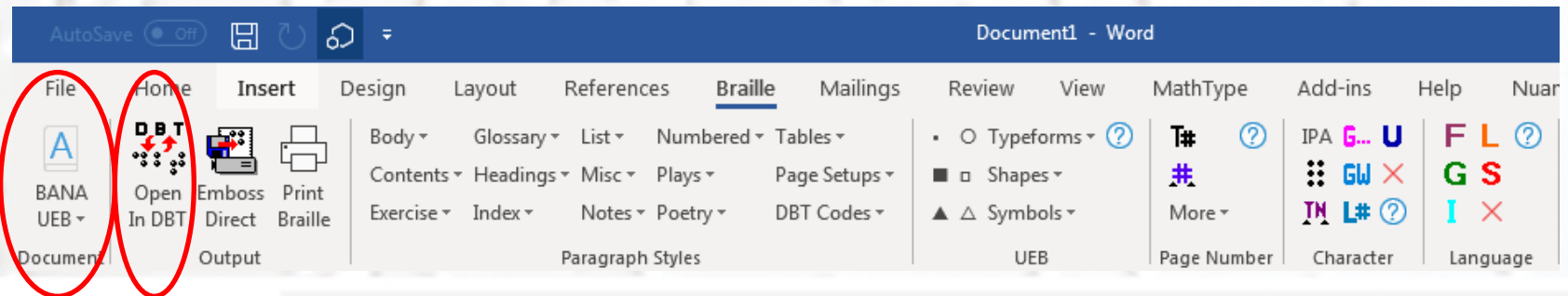
- **Double Spacing:** Shift-F2. It places braille on every other line
- **Single Spacing:** Shift-F1: It cancels the effect of double spacing.
- **Starts a new print/braille document:** Ctrl-N
- **Opens a saved print/braille file:** Ctrl-O
- **Coded/Standard View:** Alt-F3
- **Translated Line:** Ctrl-F8
- **Apply Style:** F8
- **Enter a code and parameters:** F9 or Ctrl-[
- **Code List:** F5
- **Forces a new braille page:** Ctrl-Enter.
- **New page number:** Alt-Enter
- **Center text:** Shift+F6
- **New indented paragraphs:** Ctrl-M.
- **Translate to braille or vice a versa:** Ctrl-T
- **Emboss:** Ctrl-E
- **Print:** Ctrl-P
- **Save:** Ctrl-S
- **Save As:** F3
- **Flush right w/leader:** Alt-F7. Creates guide dots between the text and page number on the table of content page.

Microsoft Word 2016

- Files can also be created, edited and formatted in Word, using the BANA-UEB template, and then directly exported to Duxbury.
- Pre-requisite: Swift needs to be installed with Duxbury, either with the original installation or as free add-on afterwards.
- A "Braille" tab will appear on the toolbar.



- Choose BANA UEB template from the Drop-down menu. Use styles for formatting. When the document is ready, click on the "Open in DBT" button. There will be a prompt to save before the document will open as a Duxbury Print file.



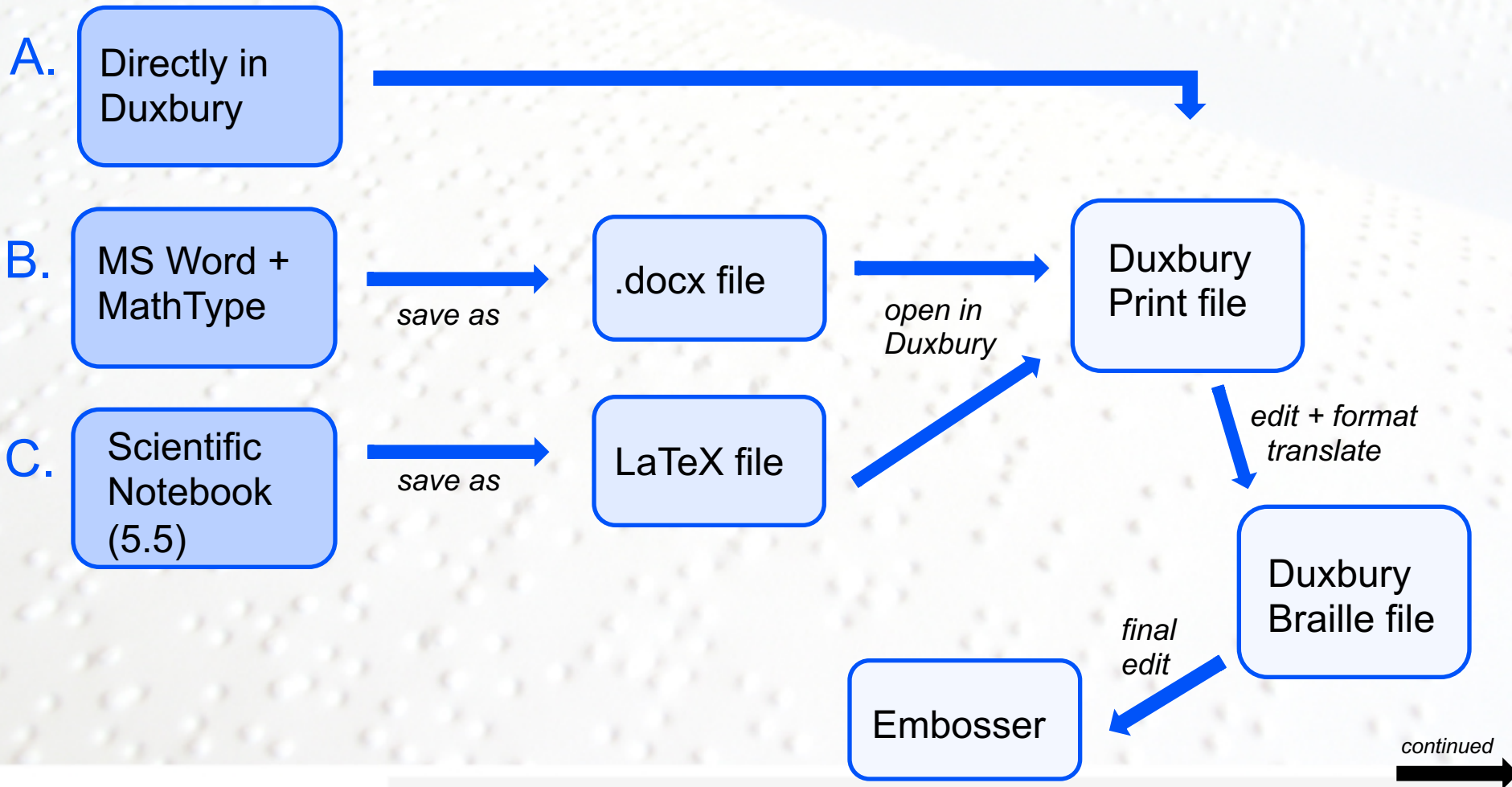
Math Transcription

- ❖ For mathematical material which does not render well in the scanning and OCR process
- ❖ For manual editing of mathematical expressions
- ❖ Some Software tools available for entering mathematical notations: MathType, Scientific Notebook
- ❖ Final editing and formatting in Duxbury Print and/or Braille file is very important for mathematical material

continued
→

Workflow Options for Math Transcription

Creating / Editing Options

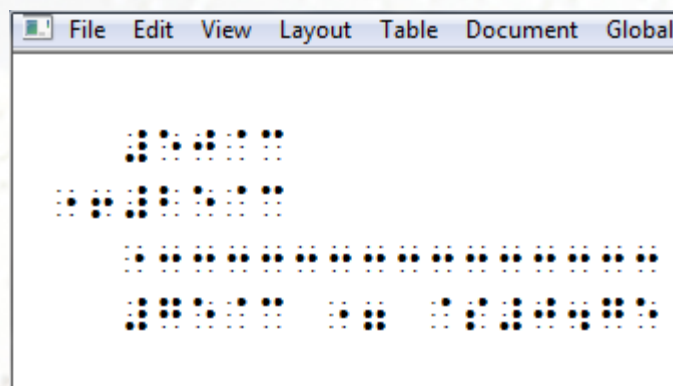


A. Direct Entry into Duxbury

1. Direct entry into Braille file

Use 6 key entry

OR



2. Direct entry into Print file

“Layout” menu on the toolbar, “Math Codes” or ALT-L-M, will display a list of math styles. It is best to work in coded view to enter the numbers between the opening and closing codes.

A screenshot of a Duxbury window in coded view. The menu bar shows File, Edit, View, and Layout. The text area contains the following codes:

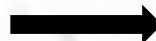
```
[fs]2[fl]3[fe][<]  
[<]  
[sqrts]64[sqrte][<]  
[<]  
a[ps]2[pe]
```

translation

A screenshot of a Duxbury window showing the Braille output of the codes from the previous window. The menu bar shows File, Edit, View, and Layout. The Braille code represents $\frac{2}{3} \sqrt[4]{64}$ followed by the text "a[ps]2[pe]".

This method is only useful for simple math expressions.

continued



B. MS Word (2016) + MathType (7)

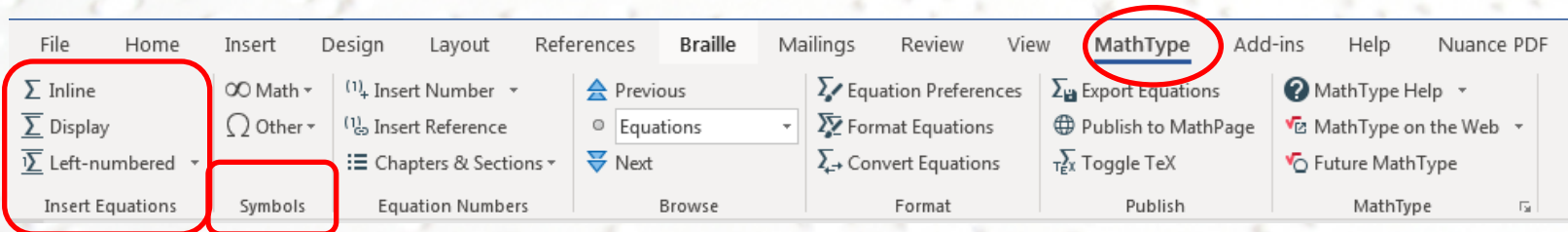
- ❑ Installing MathType will create a MathType Tab on the Toolbar of a Microsoft Word document
- ❑ MathType allows for creating and inserting mathematical expressions and symbols which will import into Duxbury and translate fairly accurately
- ❑ Useful for equations, fractions, radicals, functions, complex mathematical expressions and other symbols

continued
→

Steps for using MathType

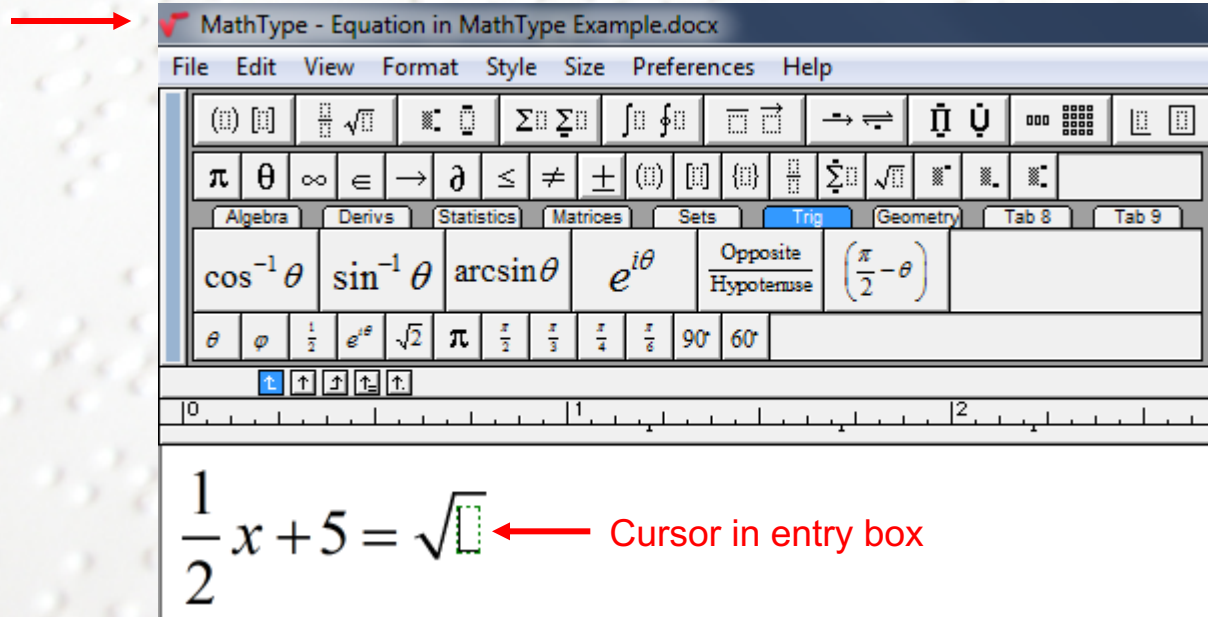
Step 1 Open a new or scanned Word document and ...

1. Go to the MathType tab in the Word document ribbon
2. Choose “Symbols” or “Insert Equations” (“Inline” can be inserted in the text; “Display” will appear centered on line by itself)



continued
→

3. Mathtype window will open - title bar will indicate the link to the word document
4. Enter math expressions using icons from the toolbar; Tab key will move cursor from one entry box to another or back to baseline; no spaces can be entered within an expression



continued
→

5. To export the math expression into the word file, go to File, choose “Close and Return to Word document” or Ctrl+F4, and choose “yes” when prompted
6. Expression will appear in word document automatically or after a mouse click

Step 2 Save the Word document as .doc or .docx file and proceed in Duxbury

Math Sheet
example:
Word file

Complete the pattern. Write the next five numbers

1. 1, 2, 4, 5, 7, 8, 10, 11, \square , \square , \square

From MathType - Symbols

Is this statement true?

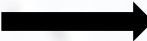
2. $\sqrt{\frac{12}{3}} = 2$

From MathType – Inline -
Equations

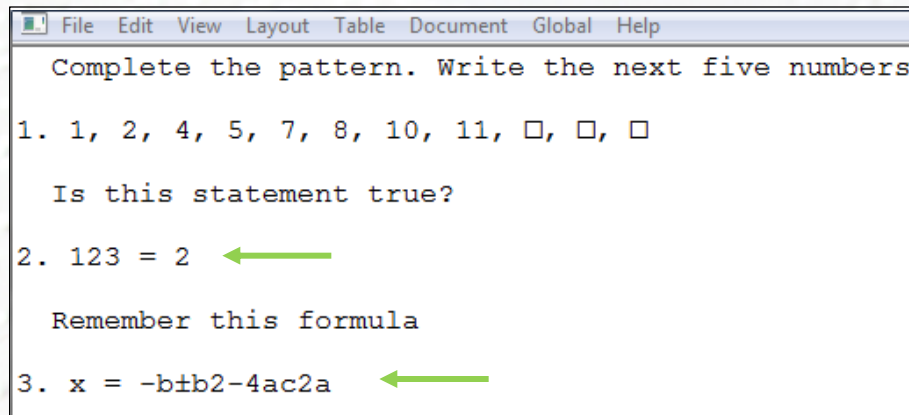
Remember this formula

3. $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

continued



Step 3 File will open as a Duxbury Print file; mathematical expressions will appear linear



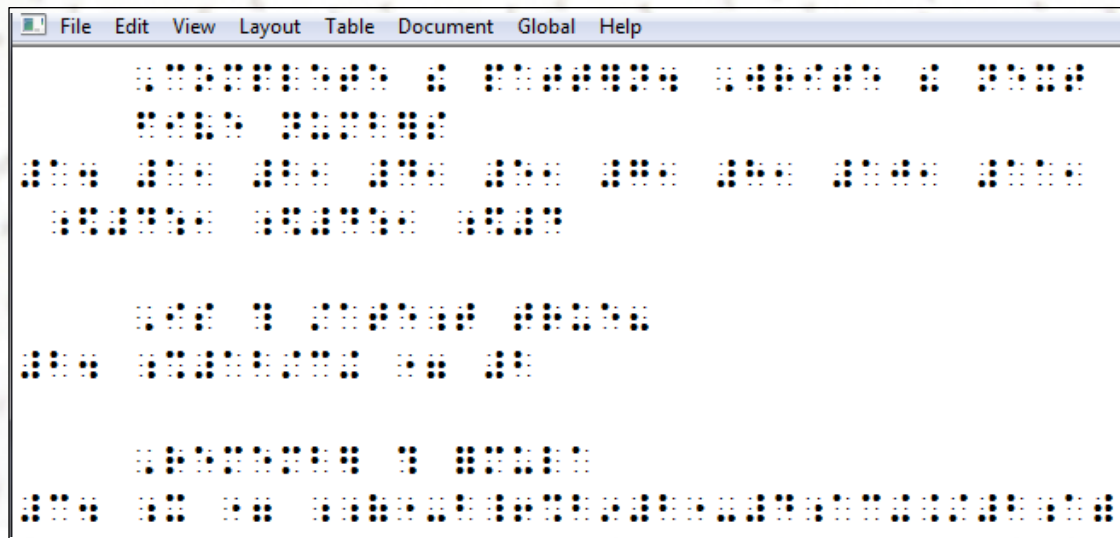
A screenshot of a software window titled 'File Edit View Layout Table Document Global Help'. The window contains the following text:
Complete the pattern. Write the next five numbers
1. 1, 2, 4, 5, 7, 8, 10, 11, □, □, □
Is this statement true?
2. $123 = 2$ ←
Remember this formula
3. $x = -b \pm b^2 - 4ac / 2a$ ←

Math Sheet example:
Duxbury Print file

Ctrl-T

Math Sheet example:
Duxbury Braille file

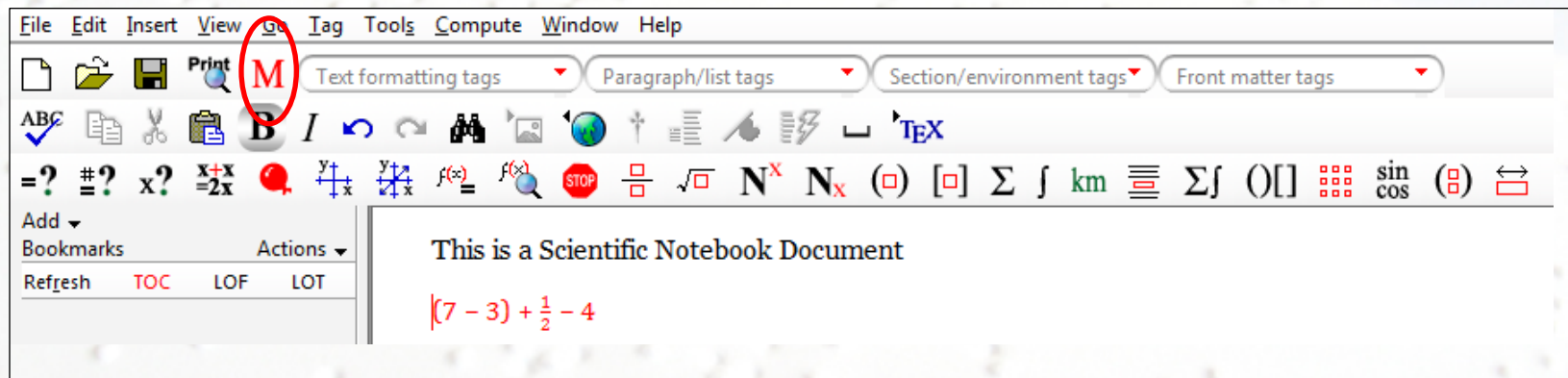
Step 4 After translation final editing and formatting is necessary, with special attention to spaces around signs of comparison and use of grade 1 indicator.



A screenshot of a software window titled 'File Edit View Layout Table Document Global Help'. The window contains the same text as the previous window, but the mathematical expressions are rendered in Braille. The Braille is correctly formatted with grade 1 indicators and appropriate spacing around comparison signs.

C. Scientific Notebook

- ❑ Only Scientific Notebook version 5.5 is compatible with Duxbury
- ❑ Text displays in black font
- ❑ Math expressions display in red font
- ❑ Toggle button to toggle between text and math mode



- ❑ File will be saved as LaTeX file
- ❑ Open in Duxbury and translate

Foreign Language Transcription in UEB

- ❖ For materials used in language classes, such as foreign language school textbooks, grammar books, worksheets accompanying foreign language textbooks.
- ❖ Transcription according to *Provisional Guidance for Transcribing Foreign Language Material in UEB, Approved May 2015 – Method 3*
 - ❖ English language is contracted
 - ❖ Foreign language sections are not contracted; foreign language signs for accented letters are used
 - ❖ English text and foreign text should be distinguished by typeface or format
- ❖ Use of Code List (F5) for entering symbols specific to the foreign language
- ❖ Use of Styles for formatting and setting translation code

continued
➔

Workflow Option for Foreign Language Transcription in UEB

Step 1 Original document

Example:
French
Language
Worksheet

5. Communication

On a separate sheet of paper, describe several things that you did in the past month or so. You may use the following questions as a guide.

- As-tu vu un bon film? (Quel film? Où? Quand?)
- As-tu vu un match intéressant? (Quel match? Où? Avec qui?)
- As-tu eu un rendez-vous? (Avec qui? Où?)
- As-tu fait un voyage? (Où? Quand?)
- As-tu fait une promenade en voiture? (Où? Quand?)

Step 2 Processing options

- a. Manual Entry into Duxbury Print file
- b. Scan → OCR (ex. Omnipage with foreign language selected will retain accented letters) → save as .doc or .docx file
- c. Create in Word → save as .doc or .docx file
Use “Insert”, “Symbols” for language specific symbols

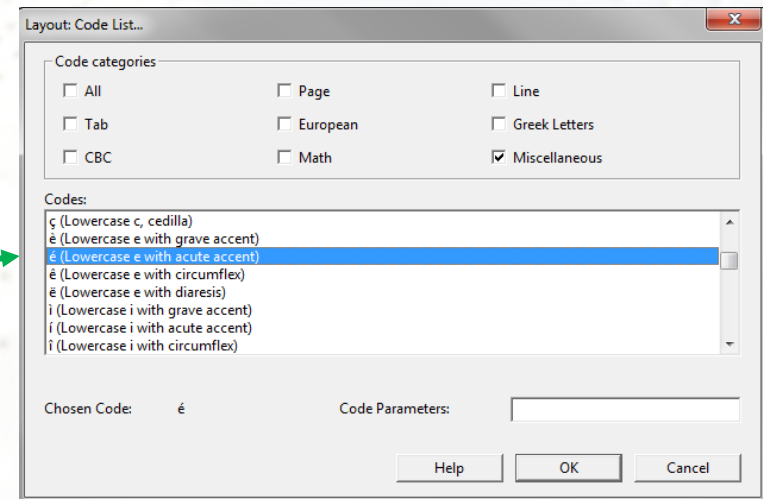
continued
→

Step 3 Open as Duxbury Print File

Step 4 Proofread and Edit

Use “Layout” menu on the toolbar,
“Code List...” or F5 for language specific
symbols which did not OCR correctly

Example:
French accented
letter é



Step 5 Format

Use Duxbury Styles for formatting
Go to “Layout” menu on the toolbar, “Apply Style”
or F8 for styles (ex. cell 5 heading style; list style)

continued
→

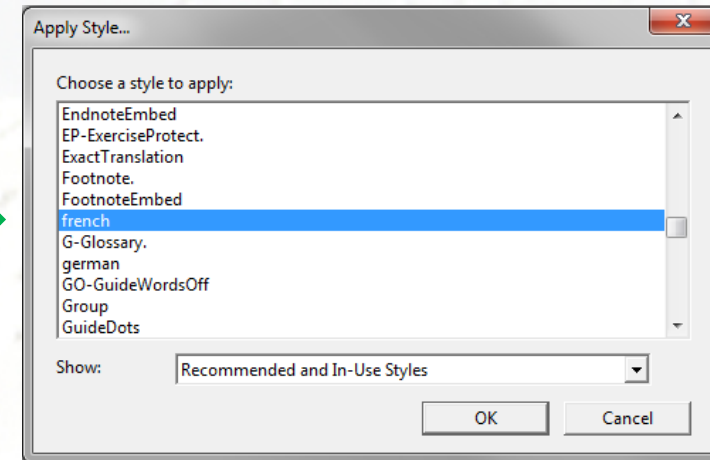
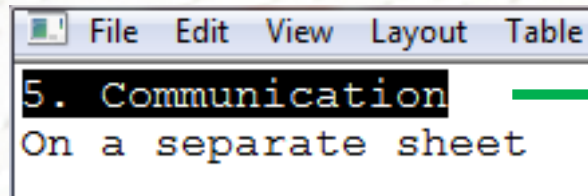
Step 6 Apply translation code to foreign language parts

Highlight Foreign expressions and choose language

Go to “Layout” menu on the toolbar,

“Apply Style... or F8

Example:
Text to be translated with
French translation code



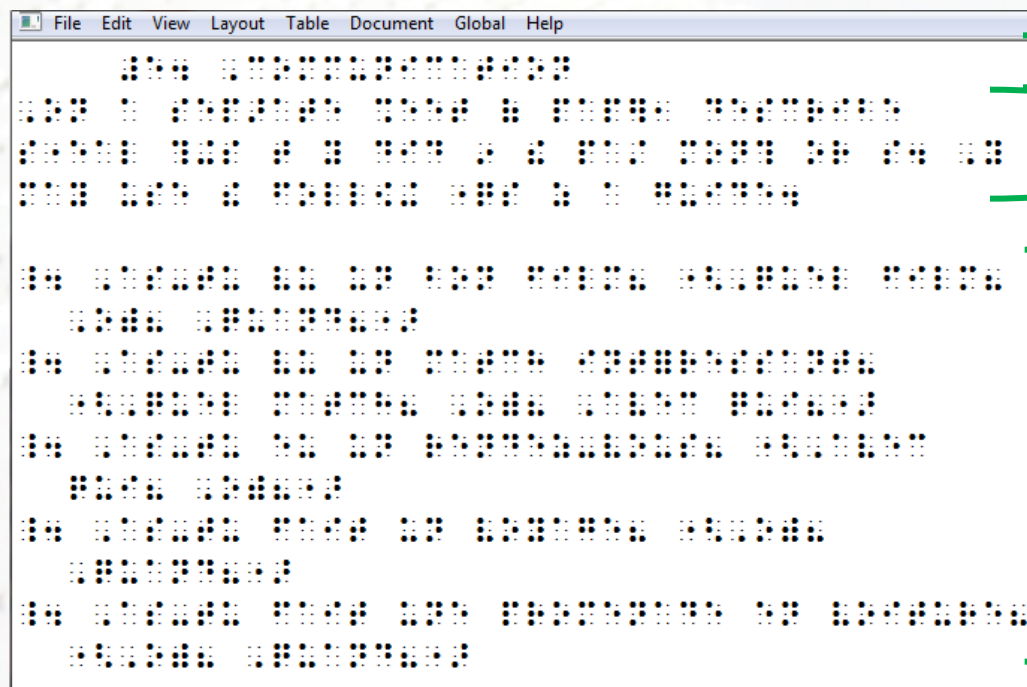
Example: applied
French Translation code
in coded view

```
<H2-HeadingCell5><french>5. Communication
</french></H2-HeadingCell5>
On a separate sheet of paper, describe several things that you
did in the past month or so. You may use the following questions
as a guide.[<]
<L-List><french> As-tu vu un bon film? (Quel film? Où?
Quand?) [<]
• As-tu vu un match intéressant? (Quel match? Où? Avec qui?) [<]
• As-tu eu un rendez-vous? (Avec qui? Où?) [<]
• As-tu fait un voyage? (Où? Quand?) [<]
• As-tu fait une promenade en voiture? (Où? Quand?)
</french></L-List>
```

Step 7 Translate

Use “File” menu on the toolbar, “Translate” or Ctrl-T

Example:
French Language
Worksheet



French uncontracted

English contracted

French uncontracted;
French symbols for
accented letters

Transcriber's Resources

Resources available on the PRCVI website www.prcvi.org –
“Resources”

- The Rules of Unified English Braille (Second Edition 2013)
- UEB Guidelines for Technical Material, updated August 2014
- Braille Formats, Principles of Print-to-Braille Transcription, 2016
- Guidelines and Standards for Tactile Graphics, 2010

Other resources

- Swift: download from Duxbury (www.duxburysystems.com)
- MathType 7: download from Design Science (www.dessci.com)