Teaching and Learning of the Nemeth Braille Code

- Numeric Indicator
- Signs and Symbols of Operation
- Equals Sign
- Spatial Arrangement for Computation
  - Addition and Subtraction
  - Multiplication
Nemeth Code

- Start teaching it early!
- Take the opportunities as they come up!
- Use literary code along with Nemeth so they learn to distinguish between the two.
- Use both vertical and horizontal format
The Layout of a Cell

On paper

1 4
2 5
3 6

On the Perkins Brailler

3 2 1 4 5 6
Basic Numbers (p.1-2)

Numeric Indicator

- **0** ➋➋➋
- **1** ➋➋
- **2** ➋➋
- **3** ➋➋
- **4** ➋➋
- **5** ➋➋➋
- **6** ➋➋➋
- **7** ➋➋➋
- **8** ➋➋➋
- **9** ➋➋➋

Use the numeric indicator at the beginning of a numeral, repeating after a space.

The numeric indicator is the same as the number sign in literary code (called English Braille in the book).
Memory Method

Use the corresponding finger with the 2 fingers of the opposite hand.
Numbers Containing Commas & Decimals (p.2-3)

- With more than one digit, only use the numeric indicator at the very beginning
- Comma (,): (Literary :)
- Decimal (.): (Literary period :)

1,234,567,890.5
A long numeral is never divided and run over to a new line if it can be kept intact by moving all of it to the new line.

If it is too long to fit on one braille line, divide by placing a hyphen after a comma and repeat the numeric indicator at the beginning of the following line.

Example

Americans consumed 297,556,000,000,000,000,000,000 pills during that period.
Basic Operations (p.4)

- Addition (+) :: (ing)
- Subtraction (-) :: (hyphen)
- Multiplication (x) :: : (accent, ch)
- Multiplication (●) :: (ch)
- Division (÷) :: :: (decimal, st)

No space before or after and no numeric indicator on the second numeral.
Use the minus symbol followed by the numeric indicator and the digits of the numeral.

-8
Equals Sign (p.4)
(Use a space before & after)

Equal to (=)

5 + 9 = 14
General Rules for Spatial Arrangements (p.5)

- Do not use the numeric indicator.
- No skipped lines within a problem.
- Use a series of dots 2-5 for the separation line between the problem and the answer. (one extra cell in both directions beyond the overall width of the arrangement).
General Rules for Spatial Arrangements (p.5)

- Operation symbols are written just above the separation line, but just to the left of the widest number above the separation line.
- At least one blank cell between the ends of the separation lines of 2 problems.
- One blank line above and below each spatial problem.
Examples (p.5)

\[
\begin{array}{ccc}
9205 & +1433 & 38459 \\
10638 & 142 & -44 \\
\hline
 & +16 & \\
 & & 236
\end{array}
\]
Carried Numbers in Addition (p.6)

- Directly above the top number in the problem, insert a line of dots 2-3-5-6 so that it is the same length as the separation line. (carried number indicator)

- Show work originally, but student should work toward doing this mentally to save on time.

- Problem should be on a single page with room to work.
Example (not in book)
Multiplication (p.7)

- Use a series of dots 2-5 for the separation line between the problem and the answer. (one extra cell in both directions beyond the overall width of the arrangement).

- Operation symbols are written just above the separation line, but just to the left of the multiplier.

- Show work originally as in addition, but student should work toward doing this mentally to save on time.
Example (p.7)

123
X 54
492
6150
6642
A blank cell should be left in each partial product directly above the decimal point in the final product.

To calculate the number of decimal places in the product, add the number of decimal places in each of the two numbers being multiplied.
Example (p.8)

345.7
X 2.77
______
24 199
241 990
691 400
957.589
Assignment

The following Practice Exercises should be translated and handed in with reflection

- p. 2 all
- p. 3 all
- p. 4 one of each operation (we will talk about the last one in this exercise)
- p. 6 pick 1
- p. 7 pick 1