



What is Braille?

Braille is a system of raised dots arranged in cells. Any combination of one to six dots may be raised within each cell, and the number and position of the raised dots within a cell conveys to the reader the letter, word, number, or symbol the cell represents. There are 64 possible combinations of raised dots within a single cell. Due to the varying needs of Braille readers, there are several different grades of Braille.

Braille was developed by Louis Braille of Coupvray, France in the beginning of the 19th century. Six dot Braille letters, common punctuation marks, and a few symbols are displayed as raised 6 dot Braille cell patterns read by using a fingertip to feel the raised dots. The 6 dot Braille alphabet, the method for representing Braille numbers, and some Braille punctuation marks are used in all languages that share the Roman alphabet. There are variations of 6 dot Braille in various Roman alphabet languages. Representation of punctuation marks and differences in the meanings of other 6 dot Braille cells are commonly used to represent special characters and/or common letter combinations.



Grade 1 Braille

The Braille Cell

- 1 ● ● 4
- 2 ● ● 5
- 3 ● ● 6

In the first of the grades of Braille, uncontracted grade 1, each possible arrangement of dots within a cell represents only one letter, number, punctuation sign, or special Braille composition sign - it is a one-to-one conversion. Individual cells cannot represent words or abbreviations in this grade of Braille. Because of this grade's inability to shorten words, books and other documents produced in grade 1 Braille are bulkier and larger than normally printed text. Grade 1 Braille is typically used only by those who are new to learning Braille.

The Braille Alphabet

•	⠠	⠡	⠢	⠣	⠤	⠥	⠦	⠧	⠨	⠩	⠪	⠫
a	b	c	d	e	f	g	h	i	j	k	l	m
⠬	⠭	⠮	⠯	⠰	⠱	⠲	⠳	⠴	⠵	⠶	⠷	⠸
n	o	p	q	r	s	t	u	v	w	x	y	z



Braille Numbers

•	••	•••	••••	•••••	••••••	•••••••	••••••••	•••••••••	••••••••••
1	2	3	4	5	6	7	8	9	0

Common Punctuation Marks

•	••	•••	••••	•••••	••••••	•••••••	••••••••	•••••••••	•	••
,	;	:	.	!	()	? “	*	”	,	-

••	•	•••	•	••	••
letter sign	capital sign	numeral sign	numerical index sign	literal index	italic sign

Grade 2 Braille

Contracted grade 2 Braille was introduced as a space-saving alternative to grade 1 Braille. In grade 2 Braille, a cell can represent a shortened form of a word. Many cell combinations have been created to represent common words, making this the most popular of the grades of Braille. There are part-word contractions, which often stand in for common suffixes or prefixes, and whole-word contractions, in which a single cell represents an entire commonly used word. Words



may be abbreviated by using a single letter to represent the entire word, using a special symbol to precede either the first or last letter of the word while truncating the rest of the word, using a double-letter contraction such as "bb" or "cc", or removing most or all of the vowels in a word in order to shorten it. A complex system of styles, rules, and usage has been developed for this grade of Braille.

Words and abbreviations

•	⠠	⠡	⠢	⠣	⠤	⠥	⠦	⠧	⠨	⠩	⠪	⠫
a	but	can	do	every	from	go	have	just	knowledge	like	more	not
⠬	⠭	⠮	⠯	⠰	⠱	⠲	⠳	⠴	⠵	⠶	⠷	⠸
people	quite	rather	so	that	us	very	will	it	you	as	and	for
⠹	⠺	⠻	⠼	⠽	⠾	⠿	⠀	⠁	⠂	⠃	⠄	⠅
of	the	with	child/ch	gh	shall/sh	this/th	which/wh	ed	er	out/ou	ow	bb
⠆	⠇	⠈	⠉	⠊	⠋	⠌	⠍					
cc	dd	en	gg; were	in	st	ing	ar					

Nemeth Code

Nemeth Code is a special type of Braille used for math and science notations. It was developed in 1946 by Dr. Abraham Nemeth as part of his doctoral studies in mathematics. In 1952, the Braille Authority of North America (BANA) accepted Nemeth Code as the standard code for representing math and science expressions in Braille. With Nemeth

