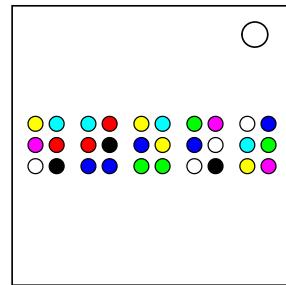


On the Subject of Color Braille

This doesn't feel right, but at least it looks good.

This module will show 30 colored dots. Each dot is in a color that is composed of a red, green, and blue component according to additive color mixing (see Appendix 1).

Decompose the colors into their red, green and blue channels to obtain three words written in Unified English Braille (see Appendix 2).

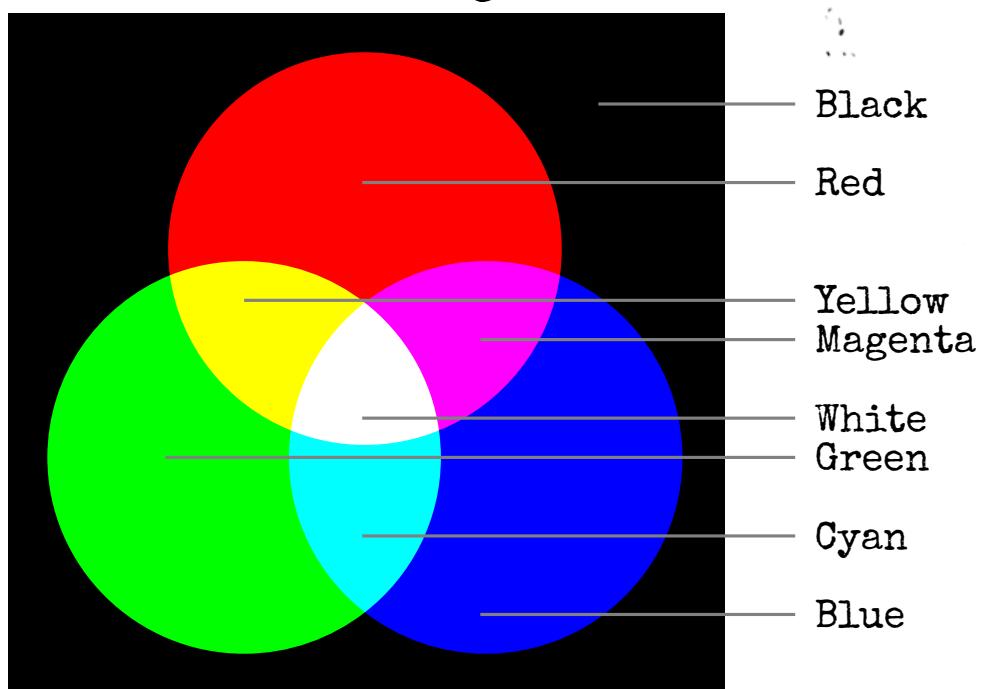


However, one of the three words has been mangled in one of the following ways:

- Each of the three rows of dots may have been shifted one dot to the left or right.
- Each Braille letter may be upside-down (rotated 180°).
- Each Braille letter may be horizontally flipped (mirrored).
- Each Braille letter may be vertically flipped.
- Each Braille dot may be inverted (dots are non-dots and non-dots are dots).

Identify which of the color channels contains the mangled word and the specific mangling applied. Then touch the dot in the position given by the following table (dots are numbered in reading order):

Mangled color channel → ↓ Mangling applied	Red	Green	Blue
Top row shifted to the right	1	9	16
Top row shifted to the left	17	5	3
Middle row shifted to the right	4	28	13
Middle row shifted to the left	2	6	21
Bottom row shifted to the right	20	25	15
Bottom row shifted to the left	22	23	30
Each letter upside-down	11	18	8
Each letter horizontally flipped	26	14	19
Each letter vertically flipped	10	24	29
Dots are inverted	27	7	12

Appendix 1: Additive color mixingAppendix 2: Unified English Braille chart

• ○ ○ ○ ○ ○ 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	● ● ○ ○ ● ● and	● ● ○ ○ ● ● for	○ ● ● ○ ● ● the	○ ● ● ○ ● ● with
○ ● ○ ● ● ○ ar	○ ○ ● ○ ● ○ bb	○ ○ ● ○ ● ○ cc	● ○ ○ ○ ○ ○ ch	○ ○ ● ○ ○ ○ ea	● ● ● ○ ○ ○ ed	○ ○ ● ○ ○ ○ en	● ● ● ○ ○ ○ er	○ ○ ● ○ ● ○ ff	○ ○ ● ○ ● ○ gg
● ○ ● ○ ○ ● gh	○ ○ ○ ○ ● ○ in	○ ● ○ ○ ● ● ing	● ○ ● ● ● ● of	● ○ ● ● ● ● ou	○ ● ● ○ ○ ● ow	● ● ○ ○ ○ ● sh	● ○ ○ ○ ● ○ st	● ● ○ ○ ● ○ th	● ○ ○ ○ ● ○ wh