

1 A simple example

Here is a small formula rendered by MathJax, for the volume of a sphere:

$$V = \frac{4}{3}\pi r^3$$

In the underlying HTML, I have associated a sentence for screen readers with `aria-label` and a braille equivalent with `aria-braillelabel` in Nemeth or Euro dialects. Unfortunately, `aria-braillelabel` is not yet supported with NVDA. To work around this, I've added the option "Set Aria label to braille" to the side bar view options, which hopefully forces NVDA to output the braille maths to a braille display.

2 Two larger examples

Here is a larger maths formula with sub-expressions:

$$\sqrt{\frac{\sum (x - \bar{x})^2}{n - 1}} = \sqrt{\frac{\sum x^2 - (\sum x)^2 / n}{n - 1}}$$

With maths equations this large and above (in University coursework, maths blocks are often much larger than this) the readable sentence no longer seems practical, and braille seems a better medium as the learner can more naturally jump around the different sub-expressions taking them in one at a time, especially on a multi-line braille display.

Another example:

$$\begin{aligned} |z| < 1 &\iff |w - 1| < |2w + 1| \\ &\iff |u + iv - 1| < |2u + 2iv + 1| \\ &\iff (u - 1)^2 + v^2 < (2u + 1)^2 + (2v)^2 \\ &\iff u^2 + v^2 - 2u + 1 < 4u^2 + 4v^2 + 4u + 1 \\ &\iff 3u^2 + 3v^2 + 6u > 0 \\ &\iff u^2 + v^2 + 2u > 0 \\ &\iff (u + 1)^2 + v^2 > 1 \\ &\iff |w + 1| > 1. \end{aligned}$$

3 Tabular data

Here is a sample table:

Alpha	Bravo	Charlie
1	2	3
4	5	6
7	8	9

I am interested to know if it's possible, either in screen reader or braille mode, to navigate the cells of a table with keyboard controls. For example, is it possible to navigate down from Charlie to 3 to 6 to 9?