This document is a sampler of the kind of MathML produced by LaTeXML, primarily for testing for sufficient MathML support. It is *not* a comprehensive test, nor a torture test.

The `m:semantics`, `m:annotation`, and `m:annotation-xml` elements will be exercised if you generate both presentation and content during post-processing using the `--pmml --cmml` options.

1 Token Elements

Token elements `m:mi`, `m:mo` and `m:mn`, with various attributes `@mathvariant`, `@mathsize` and `@class`.

$$A,\quad A,\quad \mathrm{A},\quad A,\quad \mathbf{A},\quad \mathsf{A},\quad \mathtt{A}, \tag{1}$$

$$\mathcal{A},\quad \mathscr{A},\quad \mathbb{A},\quad \mathfrak{A} \tag{2}$$

$$x,\quad x,\quad X,\quad X,\quad X,\quad X,\quad X,\quad X \tag{3}$$

And some color, `@mathcolor`, `@mathbackground`:

$$X,\quad X,\quad X,\quad X \tag{4}$$

Playing with `@minsize`, `@maxsize`, `@stretchy`:

$$(a|b),\quad (a \mid b),\quad \left(a \mid b\right),\quad \left(a \middle| b\right),\quad \left(a \middle| b\right) \tag{5}$$

$$\left(a^{b}|x\right),\quad \left(a^{b^{c}}\middle|x\right),\quad \left(a^{b^{c^{d}}}\middle|x\right) \tag{6}$$

Weird arguments for delimiters

$$(x),\quad \left(x\right),\quad \left((x-z)\right) \tag{7}$$

$$\mathrm{Hello} + y - 1.2345 \tag{8}$$

Some spacing `m:mspace`.

$$xy,\quad x\ y,\quad x\quad y \tag{9}$$

Not used: `m:mglyph`, `m:ms`.

2 General Layout Schemata

Various layout schemata `m:mrow`, `m:mfrac` (with various `@linethickness`), and `m:mstyle`:

$$\frac{a}{b}, \qquad {\scriptstyle\frac{a}{b}}, \qquad \frac{a}{b} \tag{10}$$

$$\binom{a}{b}\, a \atop b, \qquad \frac{a}{b}, \qquad \frac{a}{b}, \qquad \begin{matrix} a \\ \blacksquare \\ b \end{matrix} \tag{11}$$

$$\left(\frac{a}{b}\right), \qquad \left(\frac{a^2}{b^2}\right), \qquad \left(\frac{\int_a^b f(x)dx}{\int_a^b g(x)dx}\right) \tag{12}$$

Roots `m:msqrt` and `m:mroot`, as well as enclosures `m:menclose`:

$$\sqrt{x}, \qquad \sqrt[3]{x}, \qquad \sqrt[3]{\sqrt{x}}, \qquad \boxed{x^2}, \qquad \not{?} \tag{13}$$

More spacing examples with `m:mpadded`:

$$a+b, \qquad a\ +\ b, \qquad a\ +\ b, \qquad a\ +\ b, \tag{14}$$

$$\begin{aligned} X &= f(x) + g(x) + h(x) && (15)\\ &= f(x) + \qquad + h(x) && (16)\\ & && (17) \end{aligned}$$

Not used: `m:mfenced`, `m:mphantom`; used only for errors: `m:merror`.

3 Script and Limit Schemata

A variety of sub- and super-scripts (`m:msub`, `m:msup`, `m:msubsup`), under- and over-scripts (`m:munder`, `m:mover`, `m:munderover`), some as accents, and pre-scripts (`m:multiscripts`, `m:mprescripts`).

$$a^b, \qquad a^{b^c}, \qquad a^{b^{c^d}}, \qquad a_b, \qquad a_{b_c}, \qquad a_{b_{c_d}}, \qquad a^b_c \tag{18}$$

$$\sum^b, \qquad \sum_b, \qquad \sum_c^b \tag{19}$$

$$X = \sum_{1\le i\le j\le n} X_{ij}, \qquad X = \sum_{1\le i\le j\le n} X_{ij}, \qquad X = \sum_{1\le i\le j\le n} X_{ij}, \qquad X = \sum_{1\le i\le j\le n} X_{ij} \tag{20}$$

$$a \overset{\text{def}}{\to} b, \qquad a \underset{\text{def}}{\to} b, \qquad a \overrightarrow{\text{def}} b, \qquad a \underrightarrow{\text{def}} b \tag{21}$$

$$\overline{abc}^{s} \qquad \overleftarrow{abc}^{s} \qquad \overrightarrow{abc}^{s} \qquad \overbrace{abc}^{s} \qquad \underline{abc}_{s} \qquad \underbrace{abc}_{s} \tag{22}$$

$$ {}_pF_q, \qquad {}_a^b\!\sum_d^c \tag{23}$$

4 Tabular Math

Some basic tabular math (`m:mtable`, `m:mtr`, `m:mtd`); many combinations of row and column spacing and spans (`@rowspacing`, `@columnspacing`, `@columnspan`, `@rowspan`) are not currently tested.

$$\begin{matrix} -1 & 3 \\ 2 & -4' \end{matrix} \qquad \begin{matrix} -1 & 3 \\ 2 & -4' \end{matrix} \qquad \left\| \begin{matrix} -1 & 3 \\ 2 & -4 \end{matrix} \right\|, \qquad \left\| \begin{matrix} -1 & 3 \\ 2 & -4 \end{matrix} \right\| \tag{24}$$

Not used: `m:mlabeledtr`, `m:malignmark`, `m:malignmark`.

5 Elementary Math

Not currently used: `m:mstack`, `m:mlongdiv`, `m:msgroup`, `m:msrow`, `m:mscarries`, `m:mscarry`, `m:msline`.