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.

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

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

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

And some color, @mathcolor, @mathbackground:

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

Playing with @minsize, @maxsize, @stretchy:

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

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

$$\mathrm{Hello} + y - 1.2345 \tag{7}$$

Some spacing m:mspace.

$$xy, \quad x \; y, \quad x \qquad y \tag{8}$$

Not used: m:mglyph, m:ms.

2 General Layout Schemata

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

$$\frac{a}{b}, \quad \tfrac{a}{b}, \quad \frac{a}{b} \tag{9}$$

$$\binom{a}{b}\frac{a}{b}, \quad \frac{a}{b}, \quad \frac{a}{b}, \quad \genfrac{}{}{}{}{a}{\blacksquare}{b} \tag{10}$$

$$\left(\frac{a}{b}\right), \qquad \left(\frac{a^2}{b^2}\right), \qquad \left(\frac{\int_a^b f(x)dx}{\int_a^b g(x)dx}\right) \tag{11}$$

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

$$\sqrt{x}, \qquad \sqrt[3]{x}, \qquad \sqrt[3]{x}, \qquad \boxed{x^2}, \qquad \text{?} \tag{12}$$

More spacing examples with `m:mpadded`:

$$a+b, \qquad a\ +\ b, \qquad a\ +\ b, \qquad a\ +\ b, \tag{13}$$

$$\begin{aligned} X \quad &= \quad f(x)+g(x)+h(x) & (14)\\ &= \quad f(x)+ \qquad +h(x) & (15)\\ & & (16) \end{aligned}$$

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`, `m:none`).

$$a^b, \qquad a^{b^c}, \qquad a^{b^{c^d}}, \qquad a_b, \qquad a_{b_c}, \qquad a_{b_{c_d}}, \qquad a_c^b \tag{17}$$

$$\sum^b, \qquad \sum_b, \qquad \sum_c^b \tag{18}$$

$$X = \sum_{1\le i\le j\le n} X_{ij}, \qquad X = \sum_{1\le i\le j\le n} X_{ij}, \qquad X = \sum_{1\le i\le j\le n} X_{ij}, \qquad X = \sum_{1\le i\le j\le n} X_{ij} \tag{19}$$

$$a \xrightarrow{\text{def}} b, \qquad a \xrightarrow[\text{def}]{} b, \qquad a\overrightarrow{\text{def}}b, \qquad a\underset{\longrightarrow}{\text{def}}b \tag{20}$$

$$_pF_q, \qquad {}_a^b\!\sum_d^c \tag{21}$$

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.

$$\begin{matrix} -1 & 3 \\ 2 & -4 \end{matrix}, \qquad \begin{matrix} -1 & 3 \\ 2 & -4 \end{matrix}, \qquad \left\|\begin{matrix} -1 & 3 \\ 2 & -4 \end{matrix}\right\|, \qquad \left\|\begin{matrix} -1 & 3 \\ 2 & -4 \end{matrix}\right\| \tag{22}$$

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

5 Elementary Math

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