1 The fancy stuff

1.1 Correct matrix equations

$$\begin{pmatrix} 2 & 3 & 4 \\ 0 & 0 & 1 \\ 0 & 0 & 2 \end{pmatrix} \begin{pmatrix} 100 \\ 10 \\ 20 \end{pmatrix} = \begin{pmatrix} 310 \\ 20 \\ 40 \end{pmatrix}$$

1.2 Alignat math environment

$$\frac{a}{b} = 0$$

$$\begin{pmatrix} 2 & 3 & 4 \\ 0 & 0 & 1 \\ 0 & 0 & 2 \end{pmatrix} \begin{pmatrix} 100 \\ 10 \\ 20 \end{pmatrix} = \begin{pmatrix} 310 \\ 20 \\ 40 \end{pmatrix}$$