2.1 Aligned Math

$$\mathbf{X} = \begin{pmatrix} x_{11} & x_{12} & \cdots \\ x_{21} & x_{22} & \cdots \\ \vdots & \vdots & \ddots \end{pmatrix}$$

$$y = \begin{cases} a & \text{if } d > c \\ b + x & \text{in the morning} \\ l & \text{all day long} \end{cases}$$

$$\left(\begin{array}{c|c} 1 & 2 \\ \hline 3 & 4 \end{array}\right)$$

$$\begin{aligned} f(x) &= \cos x && (1) \\ f'(x) &= -\sin x && (2) \\ \int_0^x f(y)\,dy &= \sin x && (3) \end{aligned}$$

$$\begin{aligned} \sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \\ - \frac{x^7}{7!} + \cdots \end{aligned} \qquad (4)$$

2.2 Phantoms

$$\Gamma_{ij}{}^{k} \qquad \text{as opposed to} \qquad \Gamma_{ij}^{k}$$

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\Gamma_{ij}^{\phantom{ij}k} \qquad \textrm{as opposed to} \qquad \Gamma_{ij}^{k}
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3 Theorems

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\newtheorem{law}{Law}
\newtheorem{jury}[law]{Jury}
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Law 1 *Don't hide in the witness box*

Jury 2 (The Twelve) *It could be you! So beware and see law 1*

Law 3 *No, No, No*

4 Tables

Here I inserted a floating table with tabularx and table environments. See Table 1.

You can set your columns raggedleft by defining a new column specifier.