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- ▶ It is mainly used by people whose work may involve mathematical symbols, equations, diagrams, etc.
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- ▶ It is mainly used by people whose work may involve mathematical symbols, equations, diagrams, etc.
- ▶ It can also be used just to type plain text.
- ▶ You can even use it to create powerpoint-like presentations!
- ▶ What sort of typesetting can it do?

Maple gives us very nice ways (and colors) to present tables, as well as:

|                                    |  |
|------------------------------------|--|
| <b>Mathematical Notation</b>       | $\int_0^{10} e^{-x^2} dx = \lim_{n \rightarrow \infty} \frac{10}{n} \sum_{j=1}^n e^{-\left(\frac{10j}{n}\right)^2}.$   |
| <b>Mathematical Shorthand</b>      | $\lim_{x \rightarrow c} f(x) = L \Leftrightarrow \forall \varepsilon > 0, \exists \delta > 0$ $\ni 0 <  x - c  < \delta \Rightarrow  f(x) - L  < \varepsilon.$ |
| <b>Piecewise-Defined Functions</b> | $t = \begin{cases} \frac{1}{24} T + \frac{11}{4} & \text{if } 30 \leq T \leq 36 \\ \frac{4}{3} T - \frac{175}{4} & \text{if } 36 < T \leq 39 \end{cases}$      |

... as well as:

| Equations     | Matrices  | Calculations  |
|---------------|---|---|
| $5x + 7y = 0$ | $\begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{pmatrix}$ | $\begin{aligned} \text{Volume} &= \pi \int_0^2 x^4 + 2x^2 + 1 \, dx \\ &= \pi \left( \frac{x^5}{5} + \frac{2x^3}{3} + x \right) \Big _0^2 \\ &= \pi \left[ \left( \frac{32}{5} + \frac{16}{3} + 2 \right) - 0 \right] \\ &= \pi \left( \frac{96 + 80 + 30}{15} \right) \\ &= \frac{206\pi}{15} \end{aligned}$ |

Downside: This kind of power doesn't come for free. You have to learn formatting commands for each of these concepts.

To get:

$$\int_0^{10} e^{-x^2} dx = \lim_{n \rightarrow \infty} \frac{10}{n} \sum_{j=1}^n e^{-\left(\frac{10j}{n}\right)^2}.$$

You need to type:

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$$\int_0^{10} e^{-x^2} dx = \lim_{n \rightarrow \infty} \frac{10}{n} \sum_{j=1}^n e^{-\left(\frac{10j}{n}\right)^2}.$$
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Take it slow, and learn from people who already know  $\LaTeX$ !