klarTeXt Test File

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Arithmetic

Test

$$o(x) = 1$$
$$o = x \mapsto 1$$

Integrals

$$\int_{-5}^{5} \Theta(x)\,dx = 5.000000000000002$$
$$\int_{0}^{\pi} \sin(x)\,dx = 2.0000000000017906$$
$$\int_{0}^{\pi}\int_{0}^{\pi} y\sin(x)\,dx\,dy = 9.869604401098199$$
$$\int_{1}^{3}\int_{2}^{4} 9x^3y^2\,dy\,dx = 3360.0000000000036$$
$$\int_{0}^{1}\int_{x^2}^{x} x + 3\,dy\,dx = 0.5833333333333337$$
$$\frac{7}{12} = 0.5833333333333334$$

Sums

$$\sum_{i=1}^{5} \exp(i) = 233.2041839862982$$

$$\sum_{i=1}^{10} \ln(i) = 15.104412573075518$$

$$\ln(10!) = 15.104412573075516$$

$$\sum_{i=0}^{3} \cos\left(\frac{\pi i}{2}\right) = 0$$

$$\sum_{i=1}^{4} i \sin\left(\frac{\pi}{i+1}\right) = 7.204512160298412$$

$$\sum_{i=1}^{3} \log(i+e) = 2.00139173839899$$

$$\sum_{i=0}^{4} \frac{\pi^i}{i!} = 18.30281976060121$$

$$\sum_{i=1}^{5} \Theta(i-3) = 2.5$$

Products

$$\prod_{i=1}^{10} i = 3628800$$

$$10! = 3628800$$

$$\prod_{i=1}^{4} \exp(i) = 22026.465794806714$$

$$\prod_{i=0}^{3} \cos\left(\frac{\pi i}{2}\right) = 0$$

$$\prod_{i=1}^{4} \sin\left(\frac{\pi}{i+1}\right) = 0.3599434866124088$$

$$\prod_{i=1}^{3} \ln(i+e) = 3.552642204172372$$

$$\prod_{i=0}^{3} \frac{\pi^i}{i!} = 80.11576613127535$$

Infinity and Beyond

$$-5 \cdot \infty = -\infty$$

$$\frac{5}{0} = \infty$$

Special Functions

$$\Gamma(4+1) = 24$$
$$\Phi(0) = 0.5$$
$$\arcsin\left({}^{1}/_{2}\right) = 0.5235987755982989$$

Random Stuff

$$e(2+1) = 8.154845485377136$$
$$\text{Noah}(f, g, x, y) = f(g(x, y), y)$$
$$f(x, y) = y^2 \cdot \sin\frac{x}{y}$$
$$f = x, y \mapsto \left(y^2 \cdot \sin\left(\frac{x}{y}\right)\right)$$
$$g_2(x, y) = 1$$
$$\text{Noah}(f, g_2, 1, 1) = 0.8414709848078965$$
$$f(1, 1) = 0.8414709848078965$$
$$\text{Laura}(x, y) = e^{-g_2(x,y)}$$
$$\frac{\text{Laura}(\pi, e)}{\Gamma(3)} \cdot 2! = 0.36787944117144233$$
$$a = b$$
$$b = c$$
$$c = 4$$
$$g(x) = 2$$
$$\text{comp}(f, g, x) = f(g(x))$$
$$\text{comp}(\sin, \cos, \pi) = -0.8414709848078965$$
$$m = \min$$
$$m(3, 2) = 2$$
$$m(3) = 3$$
$$\min() = \infty$$
$$\max() = -\infty$$
$$m\left(1, 2, 3, 4, 45, 65, 7, \frac{1}{2}\right) = 0.5$$
$$\Theta(0) = 0.5$$