

klarTeXt Test File

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Arithmetic

Integrals

$$\begin{aligned}\int_{-5}^5 \Theta(x) \, dx &= 5.0000000000000002 \\ \int_0^\pi \sin(x) \, dx &= 2.0000000000017906 \\ \int_0^\pi \int_0^\pi y \sin(x) \, dx \, dy &= 9.869604401098199 \\ \int_1^3 \int_2^4 9x^3 y^2 \, dy \, dx &= 3360.0000000000036 \\ \int_0^1 \int_{x^2}^x x + 3 \, dy \, dx &= 0.5833333333333337 \\ \frac{7}{12} &= 0.5833333333333334\end{aligned}$$

Sums

$$\begin{aligned}\sum_{i=1}^5 \exp(i) &= 233.2041839862982 \\ \sum_{i=1}^{10} \ln(i) &= 15.104412573075518 \\ \ln(10!) &= 15.104412573075516 \\ \sum_{i=0}^3 \cos\left(\frac{\pi i}{2}\right) &= 0 \\ \sum_{i=1}^4 i \sin\left(\frac{\pi}{i+1}\right) &= 7.204512160298412 \\ \sum_{i=1}^3 \log(i+e) &= 2.00139173839899 \\ \sum_{i=0}^4 \frac{\pi^i}{i!} &= 18.30281976060121 \\ \sum_{i=1}^5 \Theta(i-3) &= 2.5\end{aligned}$$

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

$$\Gamma(4+1) = 24$$

$$\Phi(0) = 0.5$$

$$\arcsin(1/2) = 0.5235987755982989$$

Random Stuff

$$e(2+1) = 8.154845485377136$$

$$\text{Noah}(f,g,x,y) = f(g(x,y),y)$$

$$f(x,y) = y^2 \cdot \sin \frac{x}{y}$$

$$f = x,y \mapsto \left(y^2 \cdot \sin \left(\frac{x}{y}\right)\right)$$

$$g_2(x,y) = 1$$

$$\text{Noah}(f,g_2,1,1) = 0.8414709848078965$$

$$f(1,1) = 0.8414709848078965$$

$$\text{Laura}(x,y) = e^{-g_2(x,y)}$$

$$\frac{\text{Laura}(\pi,e)}{\Gamma(3)} \cdot 2! = 0.36787944117144233$$

$$a = b$$

$$b = c$$

$$c = 4$$

$$g(x) = 2$$

$$\text{comp}(f,g,x) = f(g(x))$$

$$\text{comp}(\sin,\cos,\pi) = -0.8414709848078965$$

$$m = \min$$

$$m(3,2) = 2$$

$$m(3) = 3$$

$$\min() = \infty$$

$$\max() = -\infty$$

$$m\left(1,2,3,4,45,65,7,\frac{1}{2}\right) = 0.5$$

$$\Theta(0) = 0.5$$