

$$\begin{aligned}
& \text{> evala}\left(\text{Reduce}\left(\frac{x^2 + 2 \cdot x \cdot y + y^2}{x^2 - y^2}\right)\right) \\
& \qquad \qquad \qquad \frac{y + x}{x - y} \tag{1} \\
& \text{> simplify}\left(\frac{1}{x^2 - 1} \cdot \frac{x + 1}{x + 2}\right) \\
& \qquad \qquad \qquad \frac{1}{(x + 2)(x - 1)} \tag{2} \\
& \text{> factor}(a^3 + 3 \cdot a^2 \cdot b + 3 \cdot a \cdot b^2 + b^3) \\
& \qquad \qquad \qquad (a + b)^3 \tag{3} \\
& \text{> factor}(x^6 + x^4 - x^2 - 1) \\
& \qquad \qquad \qquad (x - 1)(x + 1)(x^2 + 1)^2 \tag{4} \\
& \text{> Digits} := 3 \\
& \qquad \qquad \qquad \text{Digits} := 3 \tag{5} \\
& \text{> factor}(x^4 - 7.0 \cdot x + 5.0) \\
& \qquad \qquad \qquad (x - 0.763)(x - 1.56)(x^2 + 2.32x + 4.21) \tag{6} \\
& \text{> } \\
& \text{> expand}((x^2 + x + 1) \cdot (x^3 - x^2 + 1)) \\
& \qquad \qquad \qquad x^5 + x + 1 \tag{7} \\
& \text{> simplify}\left(\frac{1}{x + 1} + \frac{1}{x + 2}\right) \\
& \qquad \qquad \qquad \frac{2x + 3}{(x + 1)(x + 2)} \tag{8} \\
& \text{> simplify}\left(\frac{1}{x - 1} + \frac{1}{x + 1}\right) \\
& \qquad \qquad \qquad \frac{2x}{x^2 - 1} \tag{9} \\
& \text{> assume}(x > 0); \text{simplify}(\ln(\exp(x))) \\
& \qquad \qquad \qquad x \sim \tag{10} \\
& \text{> assume}(x > 0); \text{simplify}(\exp(\ln(x))) \\
& \qquad \qquad \qquad x \sim \tag{11} \\
& \text{> simplify}\left(\frac{\sin\left(\frac{\text{Pi}}{4}\right)}{(1 + \text{sqrt}(2)) \cdot (1 - \text{sqrt}(2)) \cdot \text{sqrt}(3)}\right) \\
& \qquad \qquad \qquad -\frac{1}{6} \sqrt{2} \sqrt{3} \tag{12} \\
& \text{> verify}\left(\sum_{k=1}^n k, \frac{1}{2} n \cdot (n + 1), \text{equal}\right) \\
& \qquad \qquad \qquad \text{true} \tag{13}
\end{aligned}$$

$$\begin{array}{|l} \textcolor{red}{>} \text{ verify } \left(\sum_{i=1}^n i^2, \frac{1}{6} n \cdot (n+1) \cdot (2n+1), \text{equal} \right) \\ \text{=} \end{array} \quad \textcolor{blue}{true} \quad (14)$$

$$\begin{array}{|l} \textcolor{red}{>} \text{ assume}(x > 0); a := \text{sqrt}(x \cdot x) + 3 \\ \text{=} \end{array} \quad \textcolor{blue}{a := x \sim + 3} \quad (15)$$

$$\begin{array}{|l} \textcolor{red}{>} \text{ assume}(k, 'integer'); \sin(k \cdot \text{Pi}) \\ \text{=} \end{array} \quad 0 \quad (16)$$

$$\begin{array}{|l} \textcolor{red}{>} \text{ assume}(k, 'integer'); \cos(k \cdot \text{Pi}) \\ \text{=} \end{array} \quad (-1)^{k \sim} \quad (17)$$

$$\begin{array}{|l} \textcolor{red}{>} \\ \text{=} \end{array}$$