

$$\text{int}(\cos(x) \exp(-I \cdot \omega \cdot x), x = -\infty .. \infty) \quad \text{undefined} \quad (1)$$

$$\text{inttrans}[\text{fourier}](\cos(x), x, \omega) \quad \pi (\text{Dirac}(\omega + 1) + \text{Dirac}(\omega - 1)) \quad (2)$$

$$\text{inttrans}[\text{fourier}](\sin(2 \cdot x), x, \omega) \quad I \pi (\text{Dirac}(\omega + 2) - \text{Dirac}(\omega - 2)) \quad (3)$$

$$\text{inttrans}[\text{fourier}](\cos(3x + 3), x, \omega) \quad \pi (e^{3I} \text{Dirac}(\omega - 3) + e^{-3I} \text{Dirac}(\omega + 3))$$

$$\text{inttrans}[\text{fourier}](x^2 \cdot \sin(3x), x, \omega) \quad I \pi (\text{Dirac}(2, \omega - 3) - \text{Dirac}(2, \omega + 3))$$

$$\text{inttrans}[\text{fourier}]\left(\frac{2}{(I \cdot x - 1)}, x, \omega\right) \quad -4 \pi e^{-\omega} \text{Heaviside}(\omega)$$

$$\text{inttrans}[\text{fourier}](A \cdot \cos(2 \cdot x), x, \omega) \quad A \pi (\text{Dirac}(\omega + 2) + \text{Dirac}(\omega - 2))$$

$$\text{inttrans}[\text{fourier}]\left(\exp\left(-\frac{(x+1)^2}{4}\right), x, \omega\right) \quad 2 \sqrt{\pi} e^{-\frac{1}{4} - \left(\omega - \frac{1}{2}I\right)^2} \quad (8)$$