

Symbolic mathematics with Maxima
Some formulas for exercise package B

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1 Syntax exercises

(1)
$$x \mapsto x^2 e^{2x} \left(\log \left(e^x + \frac{1}{x} \right) - \sqrt{x^2 + 2e^{-x}} \right)$$

2 Symbolic and numerical integrals

(2)
$$\int_0^1 \left(\int_0^1 f(x, y) dx \right) dy$$

(3)
$$\int_0^1 \left(\int_0^1 f(x, y) dy \right) dx$$

(4)
$$\int_0^1 \int_{-1}^0 \int_{-1}^1 yz e^x dx dy dz = \int_0^1 \left(\int_{-1}^0 \left(\int_{-1}^1 yz e^x dx \right) dy \right) dz$$