

**Jméno a příjmení:**

**převody jednotek:**

$$12,2 \text{ nm} = 12,2 \cdot 10^{-6} \text{ mm}$$

$$1400 \text{ g dm}^{-3} = 1400 \text{ kg m}^{-3}$$

$$872 \text{ kcal mol}^{-1} = 3648 \text{ J mol}^{-1}$$

$$2331 \text{ kPa} = 2,331 \text{ MPa}$$

$$120 \text{ min}^{-1} = 20 \text{ s}^{-1}$$

$$255 \text{ g mol}^{-1} = 0,255 \text{ kg mol}^{-1}$$

$$905 \text{ mbar} = 90,5 \text{ kPa}$$

**matematika:**

$$\int_6^8 \frac{2}{V+7} dV = [2 \ln(V+7)]_6^8 = 0,2862$$

$$\int_{700}^{300} \left( 12 + \frac{3}{T^2} - \frac{500}{T^3} \right) dT = \left[ 12T - \frac{3}{T} + \frac{250}{T^2} \right]_{700}^{300} = -4800$$

$$\frac{\partial}{\partial x} \left( y^3 \frac{12}{x^2} - \sqrt{x} e^{-yx^2} \right) = y^3 \frac{24}{x^3} - \frac{1}{2} \frac{1}{\sqrt{x}} e^{-yx^2} + \sqrt{x} e^{-yx^2} (-y2x)$$