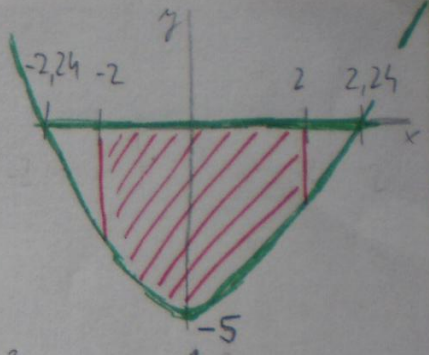
1) $\int_{-2}^{2}(x^2-5)\,dx$ $y_1 = x^2-5$ $y_2 = 0$

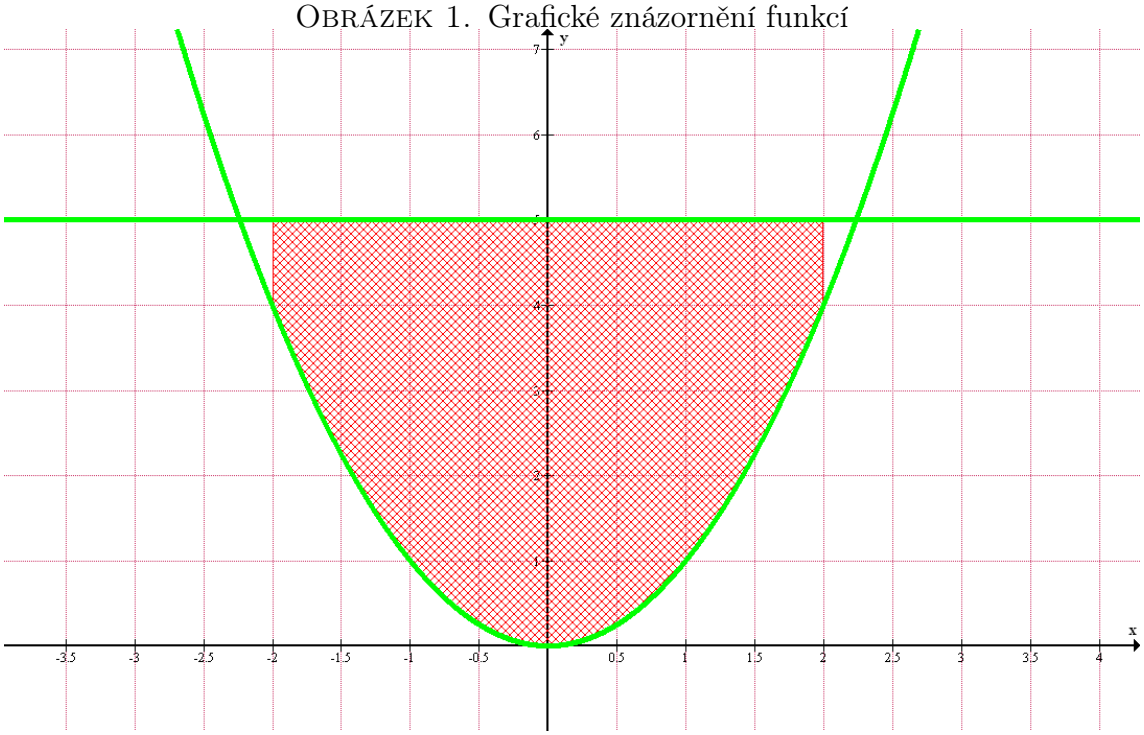


$$\int_{-2}^{2} x^2\,dx - \int_{-2}^{2} 5\,dx = \left[\frac{x^3}{3}\right]_{-2}^{2} - 5\left[x\right]_{-2}^{2} = \left[\frac{2^3}{3} - \frac{(-2)^3}{3}\right] -$$

$$-5\left[2-(-2)\right] = \frac{8}{3} + \frac{8}{3} - 5\cdot 4 = \frac{16}{3} - 20 = \frac{16-60}{3} =$$

$$= \frac{-44}{3} = -14{,}67 \qquad 0-(-14{,}67) = \underline{\underline{14{,}67}}$$ plošných jednotek (př. cm^2)

Obrázek 1. Grafické znázornění funkcí



Zdroj: program Graph