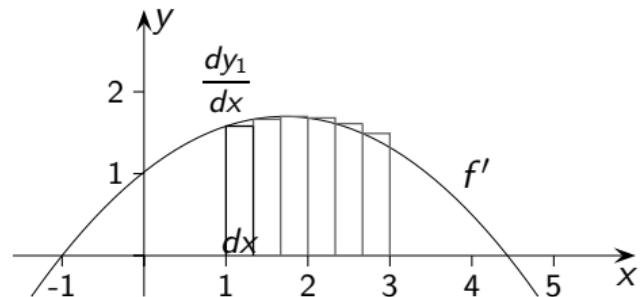
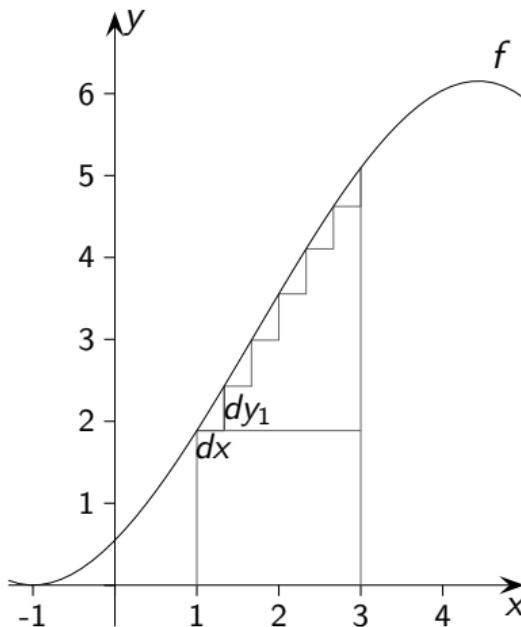
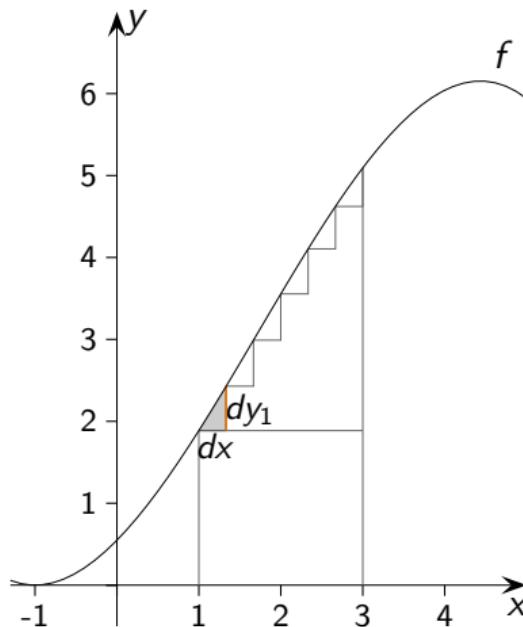


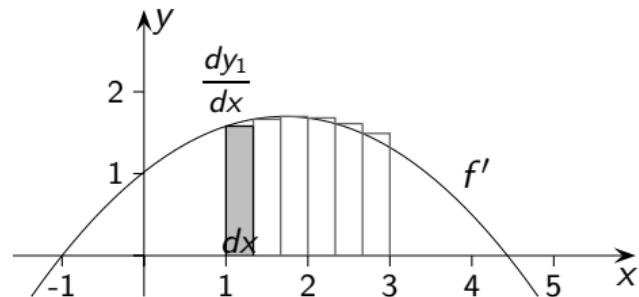
# Zum Hauptsatz der Differenzial- und Integralrechnung

groolfs.de

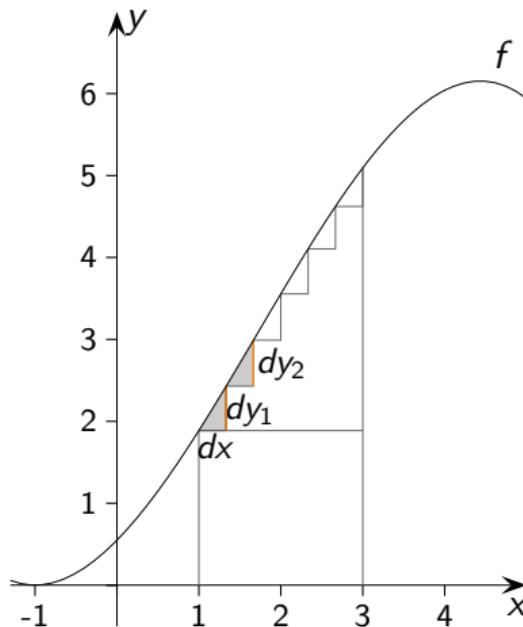




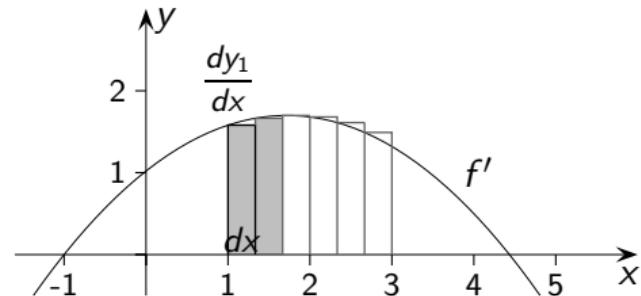
$$A = \textcolor{orange}{dy_1}$$



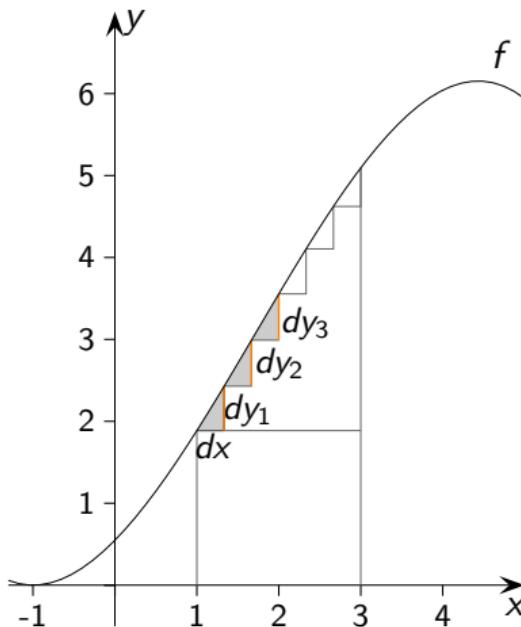
$$A_1 = \frac{dy_1}{dx} \cdot dx = \textcolor{orange}{dy_1}$$



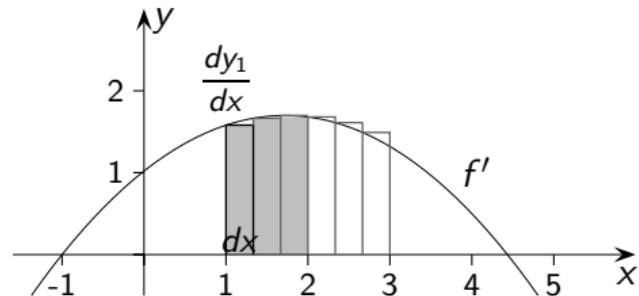
$$A = \textcolor{orange}{dy_1} + \textcolor{orange}{dy_2}$$



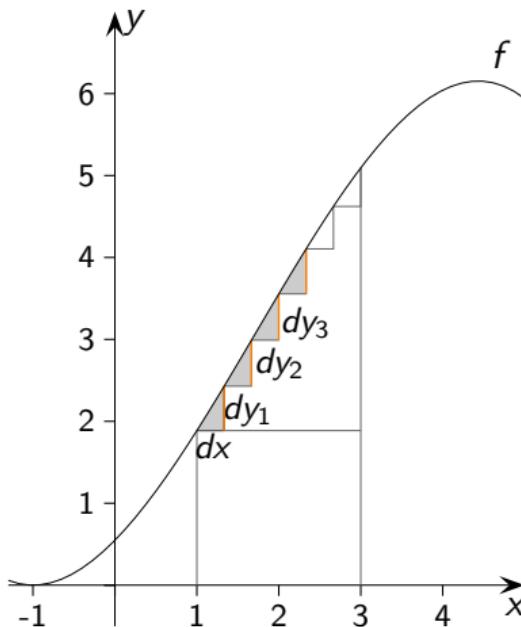
$$A_2 = \frac{dy_2}{dx} \cdot dx = \textcolor{orange}{dy_2}$$



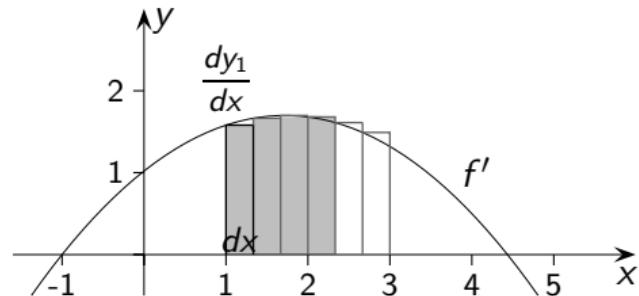
$$A = dy_1 + dy_2 + dy_3$$



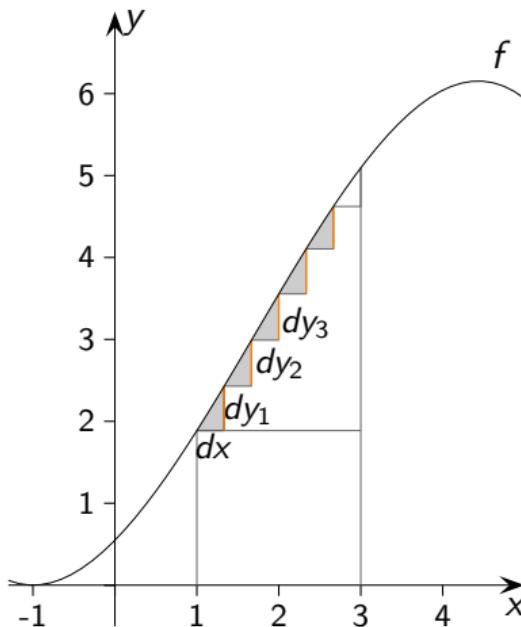
$$A_3 = \frac{dy_3}{dx} \cdot dx = dy_3$$



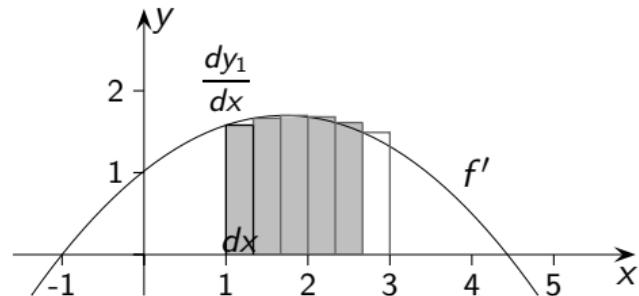
$$A = dy_1 + dy_2 + dy_3 + dy_4$$



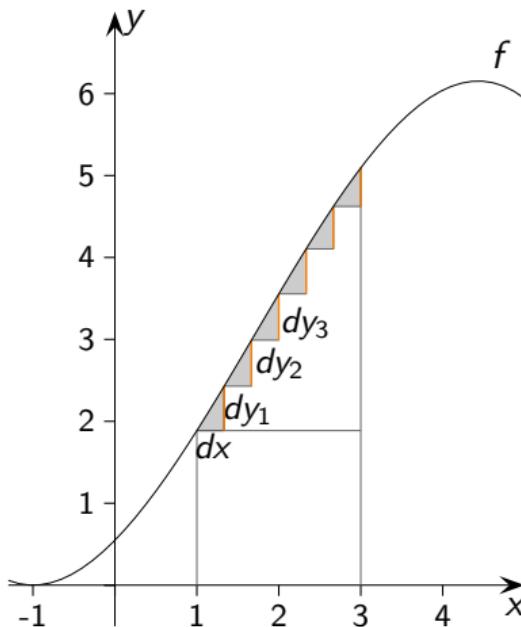
$$A_4 = \frac{dy_4}{dx} \cdot dx = dy_4$$



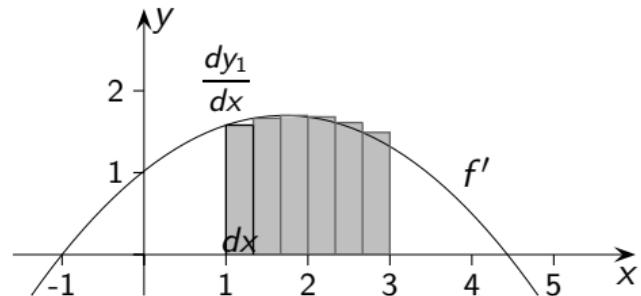
$$A = dy_1 + dy_2 + dy_3 + dy_4 + dy_5$$



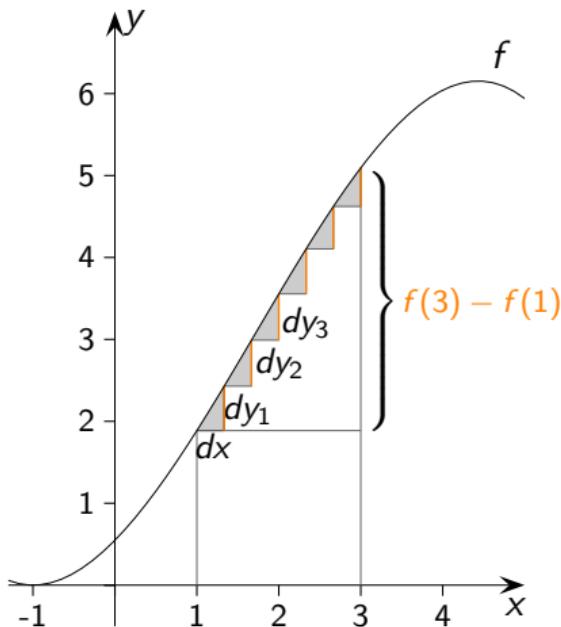
$$A_5 = \frac{dy_5}{dx} \cdot dx = dy_5$$



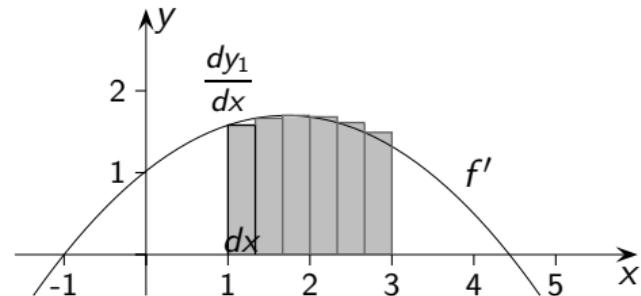
$$A = dy_1 + dy_2 + dy_3 + dy_4 + dy_5 + dy_6$$

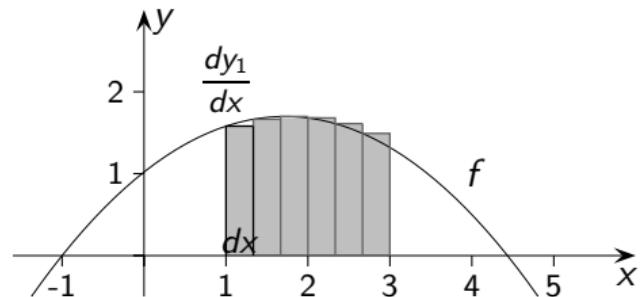
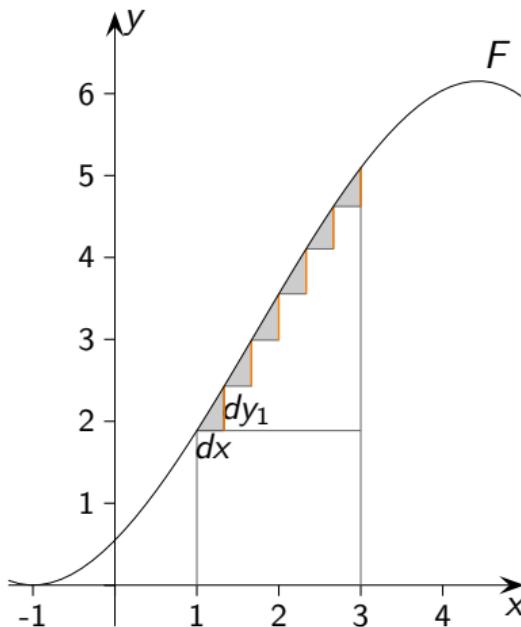


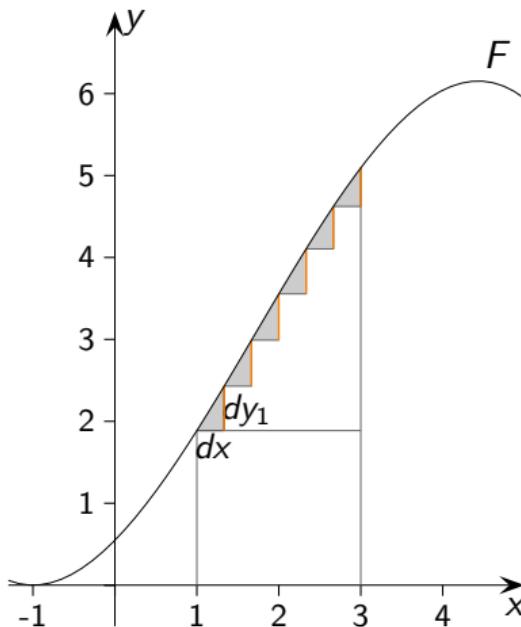
$$A_6 = \frac{dy_6}{dx} \cdot dx = dy_6$$



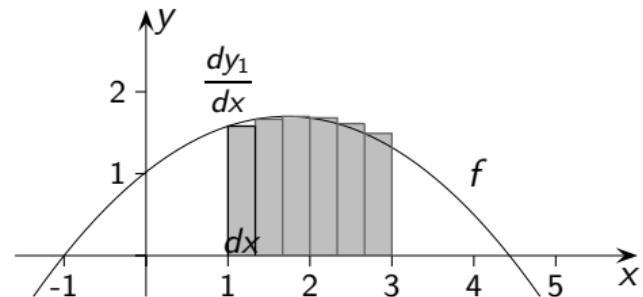
$$A = f(3) - f(1)$$

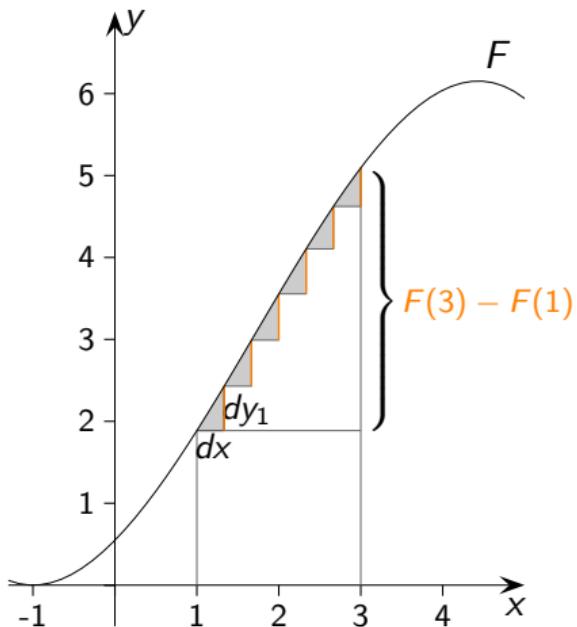




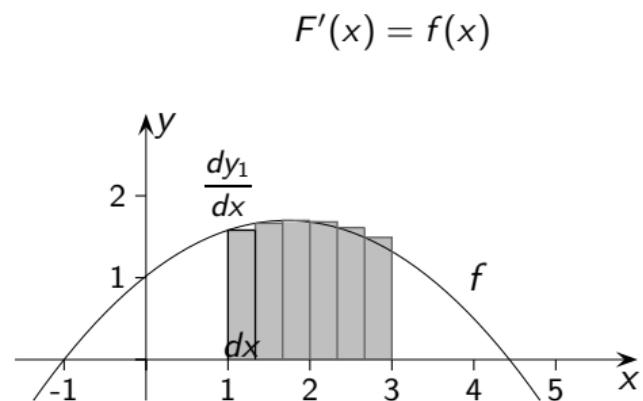


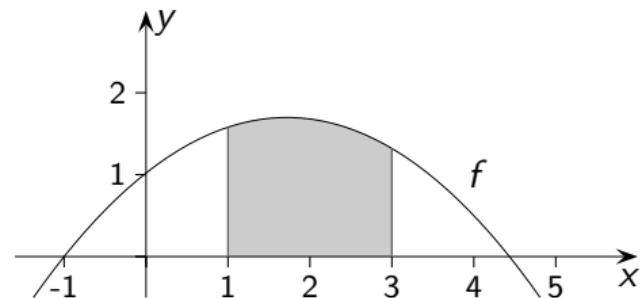
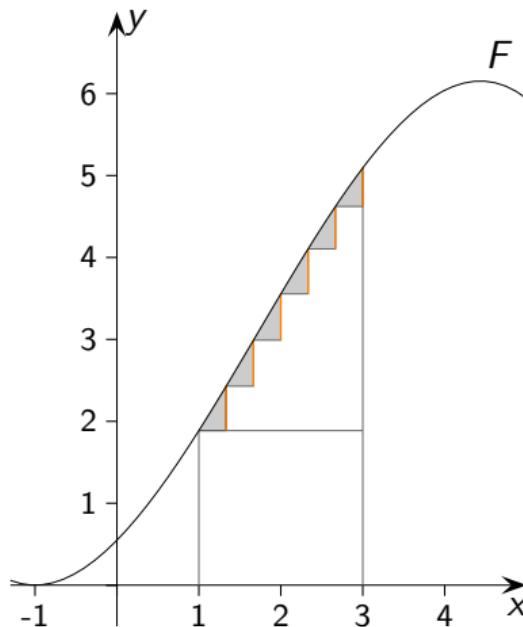
$$F'(x) = f(x)$$

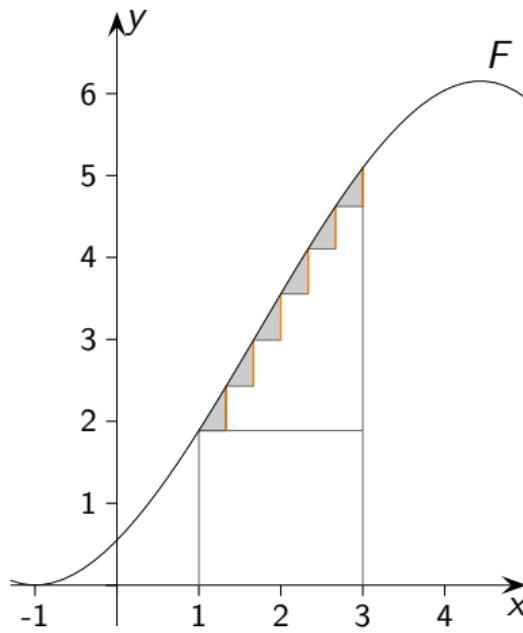




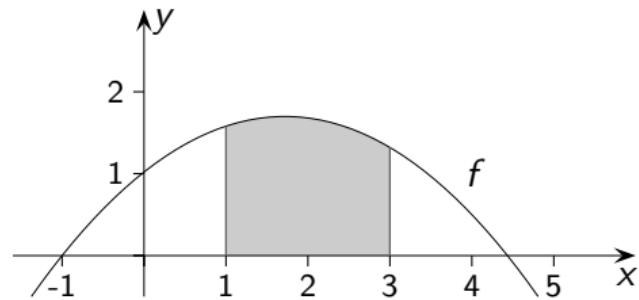
$$A = F(3) - F(1)$$

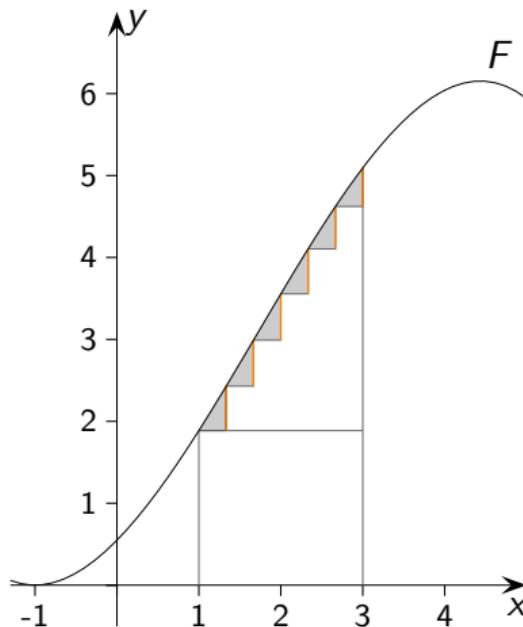




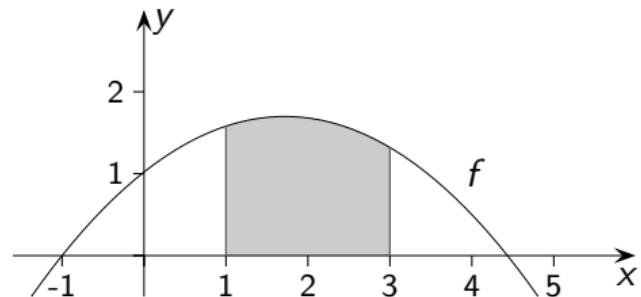


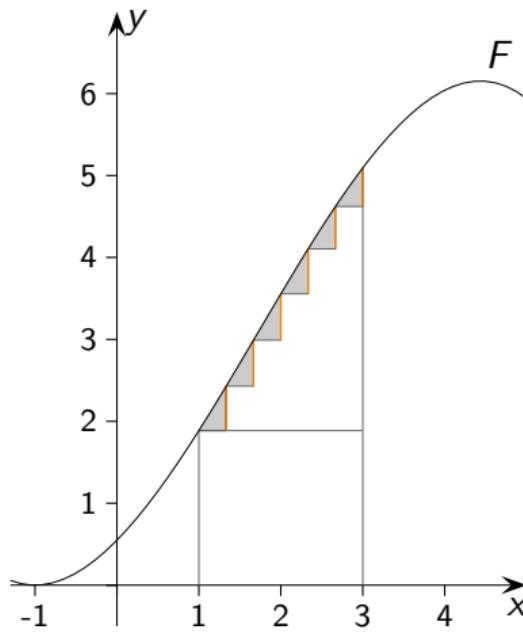
$$A = \int_1^3 f(x) dx =$$



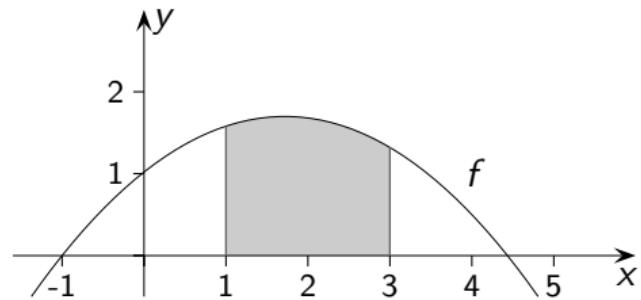


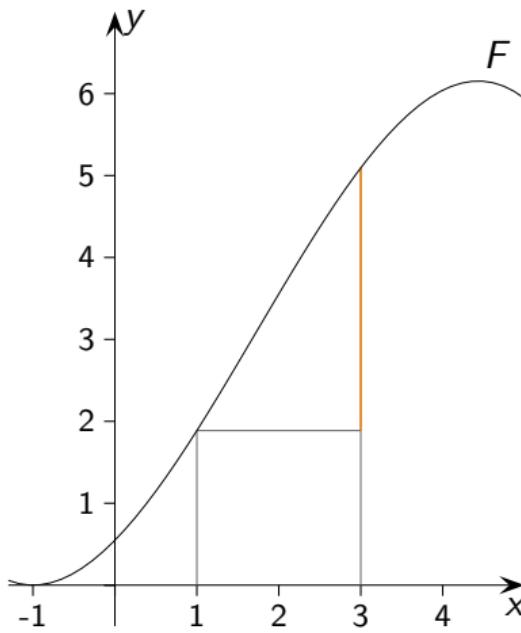
$$A = \int_1^3 f(x) dx = [F(x)]$$



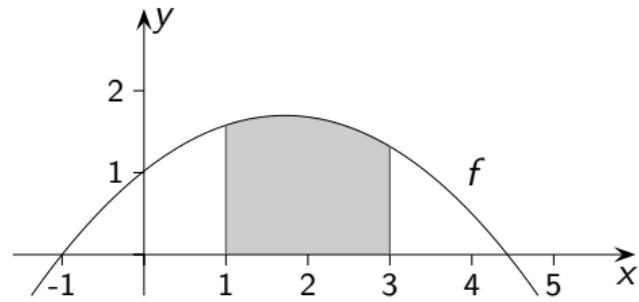


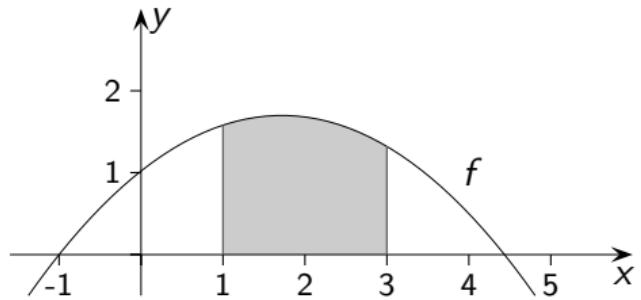
$$A = \int_1^3 f(x) dx = \left[ F(x) \right]_1^3 =$$



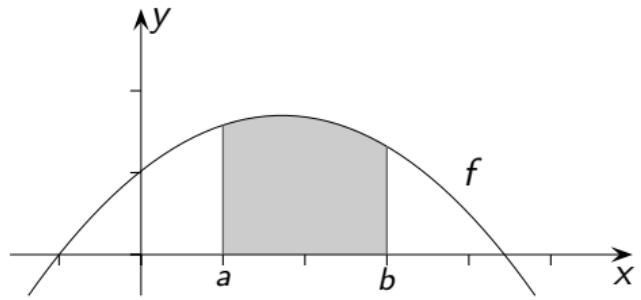


$$A = \int_1^3 f(x) dx = \left[ F(x) \right]_1^3 = F(3) - F(1)$$

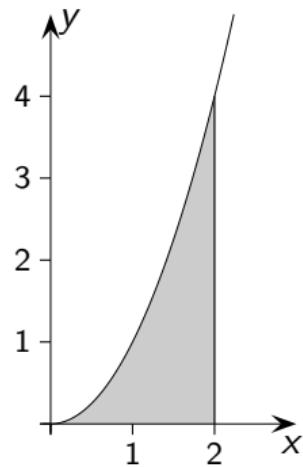




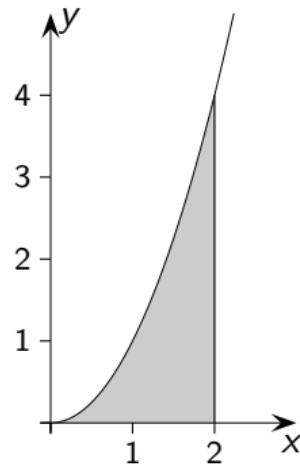
$$A = \int_1^3 f(x) dx = [F(x)]_1^3 = F(3) - F(1)$$



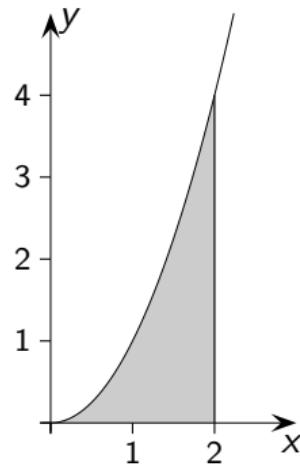
$$A = \int_a^b f(x) dx = [F(x)]_a^b = F(b) - F(a)$$



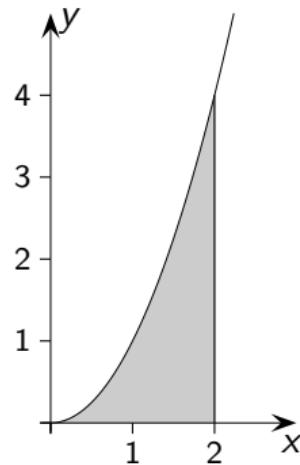
$$\int_0^2 x^2 \, dx =$$



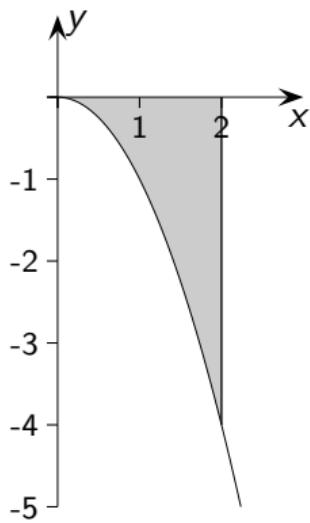
$$\int_0^2 x^2 \, dx = \left[ \frac{1}{3}x^3 \right]_0^2 =$$



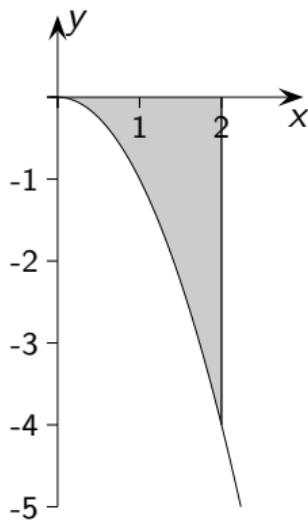
$$\int_0^2 x^2 \, dx = \left[ \frac{1}{3}x^3 \right]_0^2 = \frac{1}{3}2^3 - \frac{1}{3}0^3 =$$



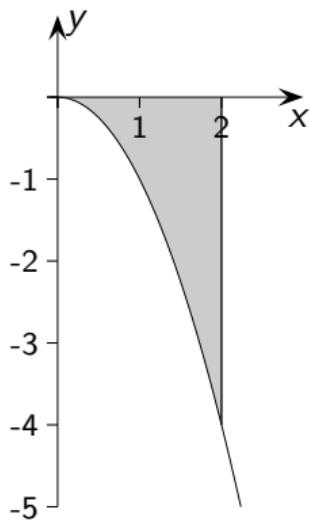
$$\int_0^2 x^2 \, dx = \left[ \frac{1}{3}x^3 \right]_0^2 = \frac{1}{3}2^3 - \frac{1}{3}0^3 = \frac{8}{3}$$



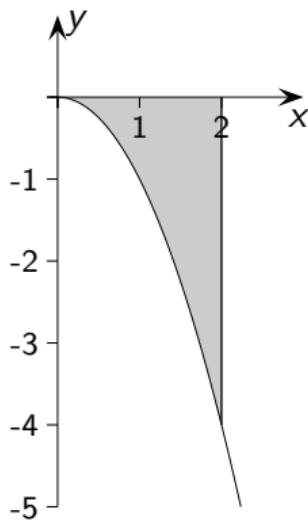
$$\int_0^2 (-x^2) \, dx =$$



$$\int_0^2 (-x^2) \, dx = \left[ -\frac{1}{3}x^3 \right]_0^2 =$$



$$\int_0^2 (-x^2) \, dx = \left[ -\frac{1}{3}x^3 \right]_0^2 = -\frac{1}{3}2^3 + \frac{1}{3}0^3 =$$



$$\int_0^2 (-x^2) \, dx = \left[ -\frac{1}{3}x^3 \right]_0^2 = -\frac{1}{3}2^3 + \frac{1}{3}0^3 = -\frac{8}{3}$$