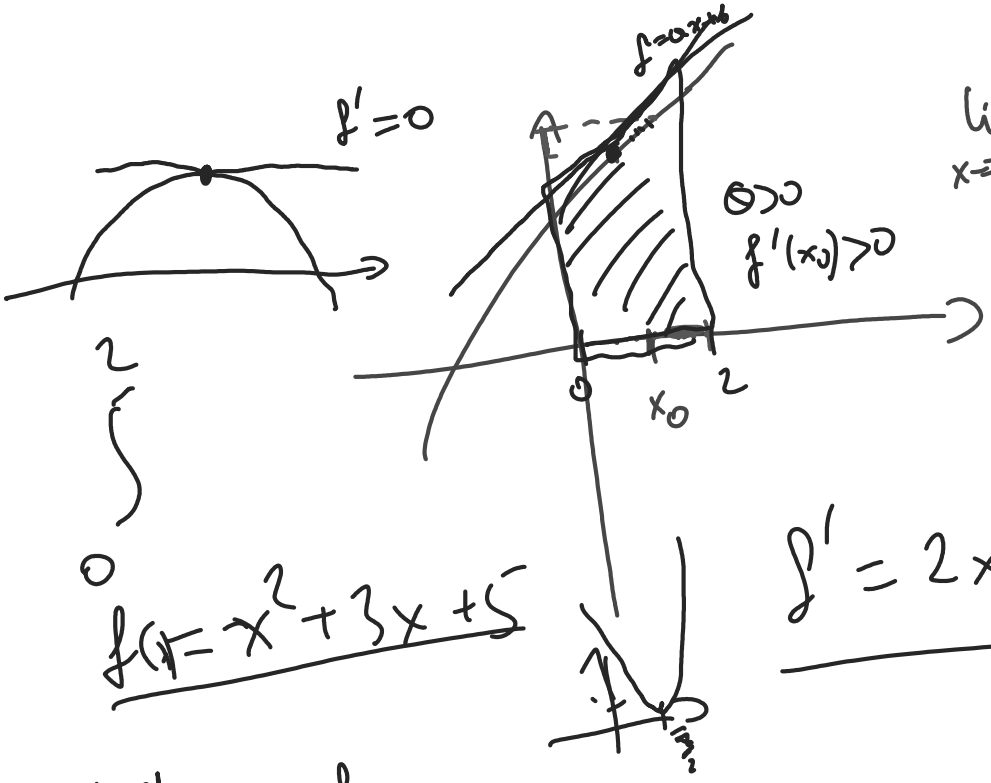
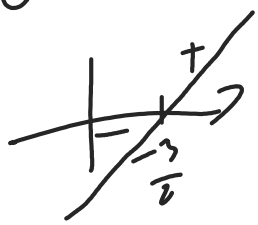



$$\lim_{x \to x_0} \frac{f(x) - f(x_0)}{x - x_0}$$

$x_0 = -\frac{3}{2}$




$f(x) = x^2 + 3x + 5$

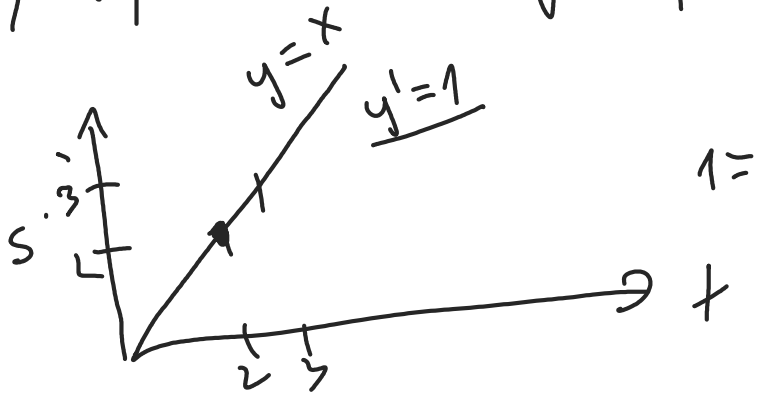
$f' = 2x + 3$

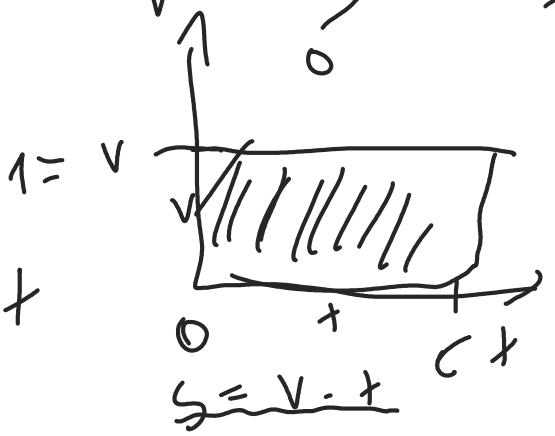
shift vel acc

$S, V, a$

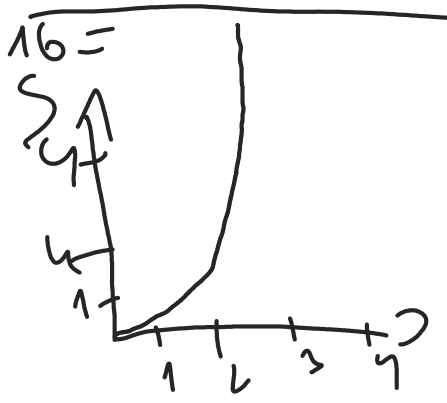
$V = \frac{S}{t}$

$\int_0^S V\,dV = S$



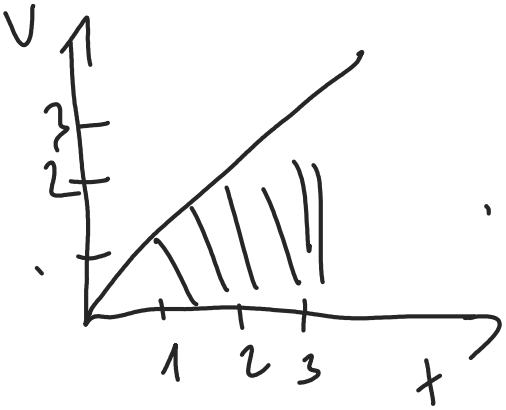



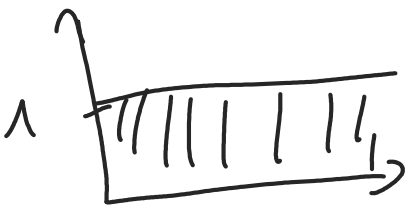

$S = V \cdot t$




$S = t^2$

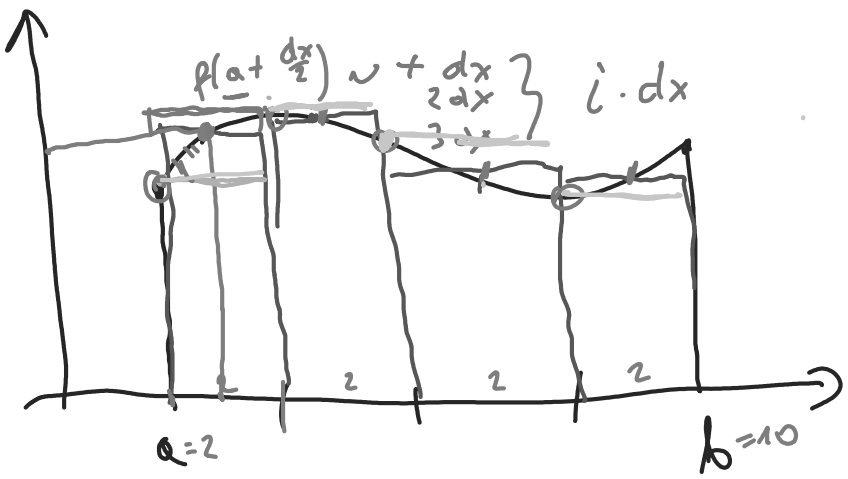
$f(t) = t^2$

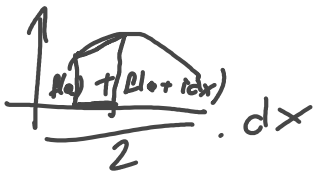



$\int a\,dt = V$

$\int\int a\,dt\,dt = S$




$dx = (b-a)/n$ 1/2

$p = a \cdot b$

$p : 2 \cdot$

$n = 4$

1) Na katce wzór

$$\int x^n \, dx = \frac{x^{n+1}}{n+1}$$

$$\int \sqrt{x} + x^6 \, dx = \frac{2x^{\frac{3}{2}}}{3} + \frac{x^7}{7}$$

$$\int x^3 \, dx = \frac{x^4}{4} \qquad \int 2x^7 \, dy = \frac{x^8}{4}$$

$$\int x^2 + 3x + 5 \, dx = \frac{x^3}{3} + \frac{3x^2}{2} + 5x$$

$$\int \frac{x^6 + x^3 - 7x}{x} \, dx = \frac{x^6}{6} + \frac{x^3}{3} - 7x$$

$$\int 3x^2 \, dx = \frac{3x^3}{3} = x^3$$

2. C. Вторая

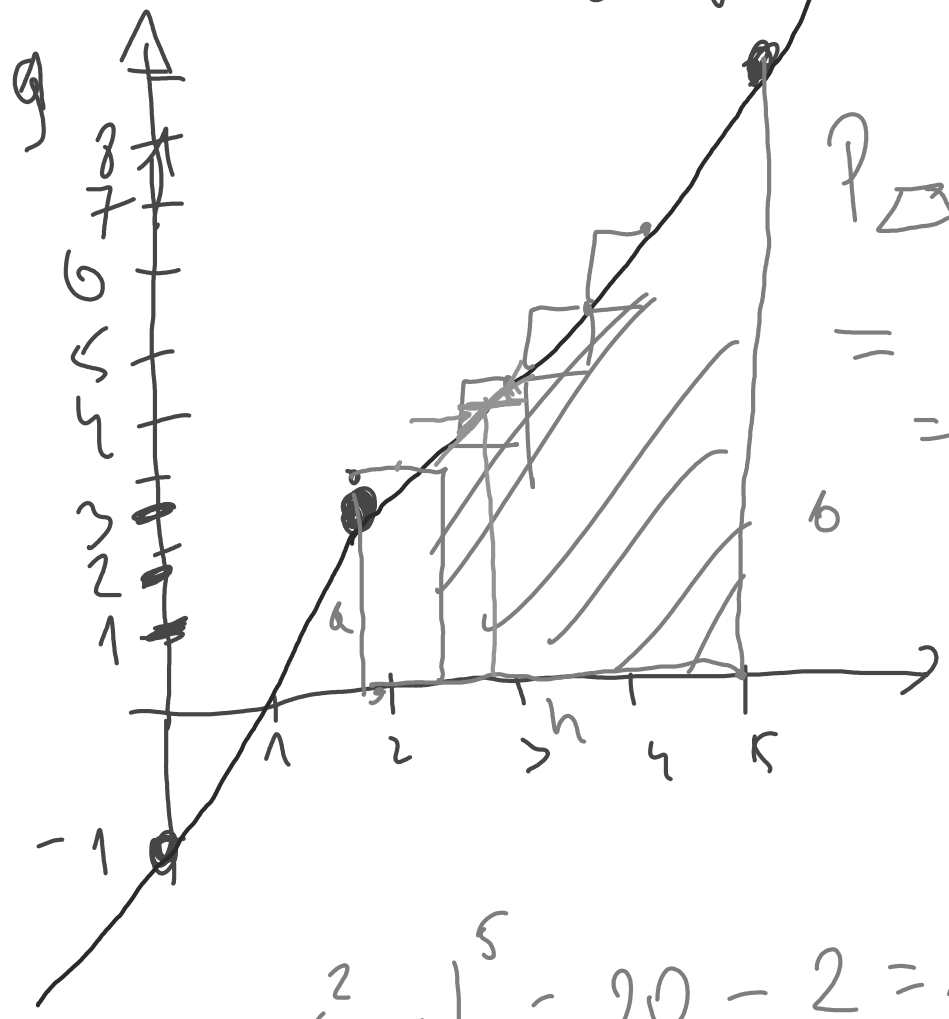
$$\int_a^b f(x) = F(b) - F(a)$$

$$\int_1^3 3x^2 + 5\,dx = \left[x^3 + 5x\right]_1^3 =$$

$$(3^3 + 5 \cdot 3) - (1^3 + 5 \cdot 1) = 42 - 6 = 36$$

# Osi. PD

$y = 2x - 1$ i obl. pod wykresem w przed. $\langle 2; 5 \rangle$




$$P_{\square} = \frac{a+b}{2} \cdot h$$

$$= \frac{3+9}{2} \cdot 3$$

$$= 18 \quad //$$

$$\int_2^5 2x - 1 \, dx = x^2 - x \Big|_2^5 = 20 - 2 = 18 \quad //$$