

Nr. 9) $F(x) = 0,4x^2$; $F'(x) = 0,8x = f(x) = \underbrace{x - 0,2x}$
 $\int_1^2 (0,8x) dx = [0,4x^2]_1^2 \rightarrow \text{III und IV ist richtig}$

Nr. 10) a) $\int_0^4 (-x) dx = \left[-\frac{x^2}{2}\right]_0^4 = -\frac{4^2}{2} - \left\{-\frac{0^2}{2}\right\} = -8$

b) $\int_{-1}^1 (-2x) dx = \left[-2 \cdot \frac{x^2}{2}\right]_{-1}^1 = -1^2 - \left\{-(-1)^2\right\} = -1 + 1 = 0$

c) $\int_{-2}^2 (-x^2) dx = \left[-\frac{x^3}{3}\right]_{-2}^2 = -\frac{2^3}{3} - \left\{-\frac{(-2)^3}{3}\right\} = -\frac{8}{3} - \frac{8}{3} = -\frac{16}{3}$

d) $\int_{-4}^{-2} (-0,5x) dx = \left[-\frac{1}{2} \cdot \frac{x^2}{2}\right]_{-4}^{-2} = \left[-\frac{x^2}{4}\right]_{-4}^{-2}$
 $= -\frac{(-2)^2}{4} - \left\{-\frac{(-4)^2}{4}\right\} = -1 + 4 = 3$

e) $\int_{-20}^{-10} (-1) dx = \left[-1 \cdot x\right]_{-20}^{-10} = -1 \cdot (-10) - \left\{-1 \cdot (-20)\right\} =$
 $= 10 - 20 = -10$