



2.1.0

$$y' = -2x$$

$$y'(1) = -2$$

$$y = -2x + 5$$

! prüfen ob / ist  
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$$\underline{x=2.49} \leftarrow \frac{1}{2}x - 1 = -2x + 5$$

$$S = \int_{-2}^{2.49} (-2x + 5 - 4 + x^2) dx + \int_{2.49}^2 (-2x + 5 - \frac{1}{2}x + 1) dx =$$

$$\left. \frac{x^3}{3} - x^2 + 5x \right|_{-2}^{2.49} + \left. -\frac{5}{2}x + 6x \right|_{2.49}^2 =$$

$$\left( \frac{8}{3} - 4 + 10 \right) - \left( \frac{1}{3} - 1 + 5 \right) + \left( -\frac{5 \cdot 2.49^2}{2} + 14.49 \right) - \left( -5 + 12 \right) = \frac{1}{3} + \frac{1}{5} = \frac{8}{15}$$