

Integral Aufgabe 39

$$f(x) = 2x^2 - 2x - 7,5$$

Nullstellen:

$$2x^2 - 2x - 7,5 = 0$$

A, B, C - Formel:

$$A = 2, B = -2, C = -7,5$$

$$x_{1,2} = \frac{-(-2) \pm \sqrt{(-2)^2 - 4 \cdot 2 \cdot (-7,5)}}{2 \cdot 2}$$

$$x_{1,2} = \frac{2 \pm 8}{4}$$

$$x_1 = 2,5$$

$$x_2 = -1,5$$

$$A = \int_{-1,5}^{2,5} (2x^2 - 2x - 7,5) dx = \left| \frac{2x^3}{3} - x^2 - 7,5x \right|_{-1,5}^{2,5} = |-14,58 - (6,75)|$$

$$\mathbf{A = 21,33}$$

