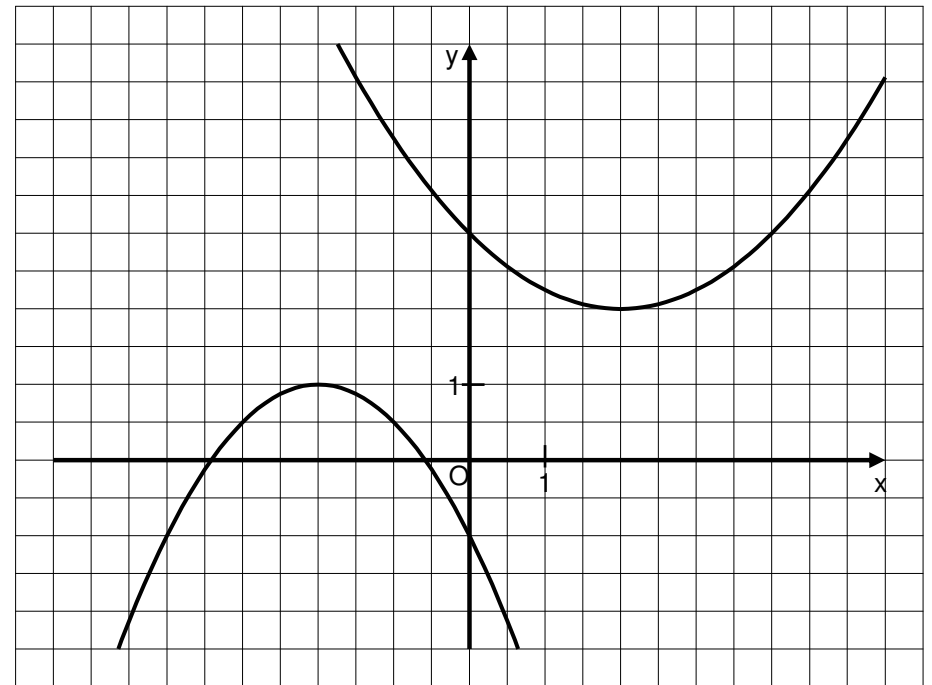


10II S.22/3b

$y = 0,25x^2 - x + 3$ $y = 0,25(x^2 - 4x + 2^2 - 2^2 + 12)$ $y = 0,25(x - 2)^2 + 2$ $S(2 2)$	$D_{(x)} = \mathbb{R}$ $W_{(y)} = \{y y \geq 2\}$
$y = -0,5x^2 - 2x - 1$ $y = -0,5(x^2 + 4x + 2^2 - 2^2 + 2)$ $y = -0,5(x + 2)^2 + 1$ $S(-2 1)$	$D_{(x)} = \mathbb{R}$ $W_{(y)} = \{y y \leq 1\}$
<p>Nullstelle:</p> $0 = -0,5(x + 2)^2 + 1$ $-1 = -0,5(x + 2)^2$ $2 = (x + 2)^2$ $\sqrt{2} = x + 2 \quad \vee \quad -\sqrt{2} = x + 2$ $\sqrt{2} - 2 = x \quad \vee \quad -\sqrt{2} - 2 = x$ $-0,59 = x \quad \vee \quad -3,41 = x$	
$IL = \{-3,41; -0,59\}$	



$$\overline{PQ} = d_{(x)}$$

$$d_{(x)} = \frac{1}{4}x^2 - x + 3 - \left(-\frac{1}{2}x^2 - 2x - 1\right)$$

$$d_{(x)} = \frac{1}{4}x^2 - x + 3 + \frac{1}{2}x^2 + 2x + 1$$

$$d_{(x)} = \frac{3}{4}x^2 + x + 4$$

$$d_{(x)} = \frac{3}{4} \cdot \left(x^2 + 1\frac{1}{3}x + \left(\frac{2}{3}\right)^2 - \left(\frac{2}{3}\right)^2 + 5\frac{1}{3} \right)$$

$$d_{(x)} = \frac{3}{4} \cdot \left(x + \frac{2}{3} \right)^2 + 3\frac{2}{3}$$

$$d_{\min} = 3\frac{2}{3} \text{ LE für } x = -\frac{2}{3}$$