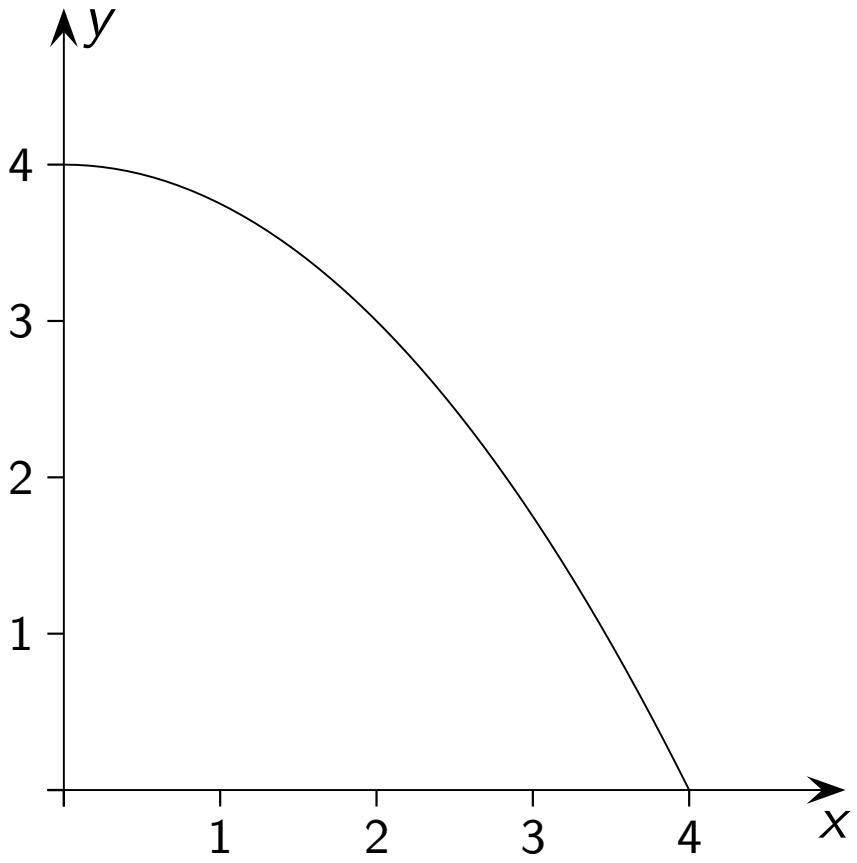
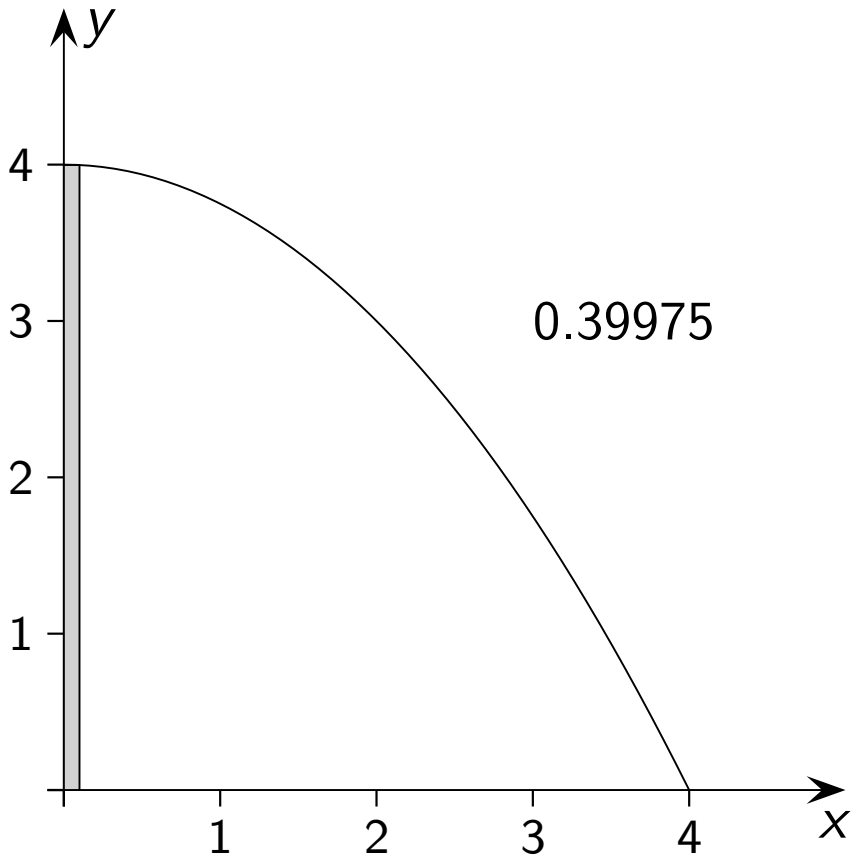
Extremwertaufgaben

G.Roolfs

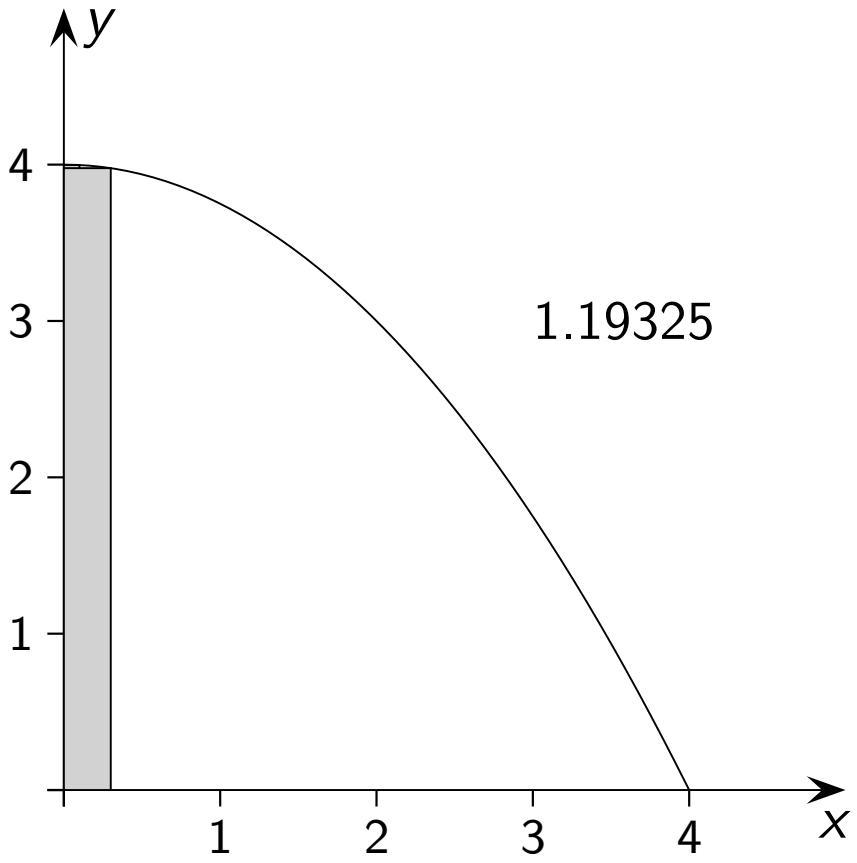
$f(x) = -\frac{1}{4}x^2 + 4$



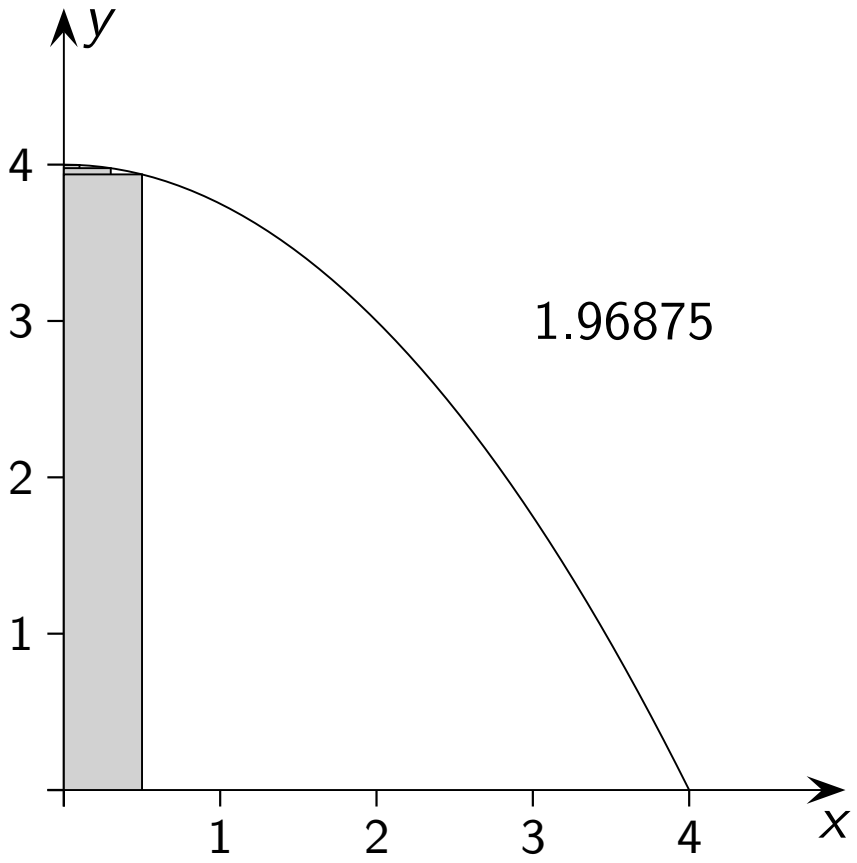
$f(x) = -\frac{1}{4}x^2 + 4$



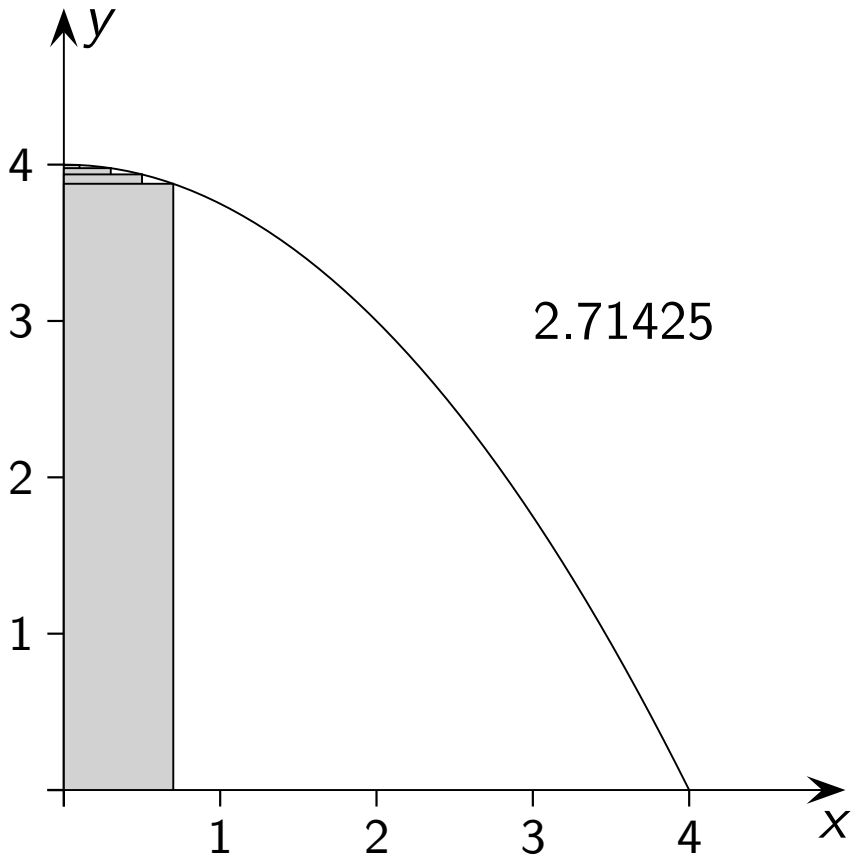
$f(x) = -\frac{1}{4}x^2 + 4$



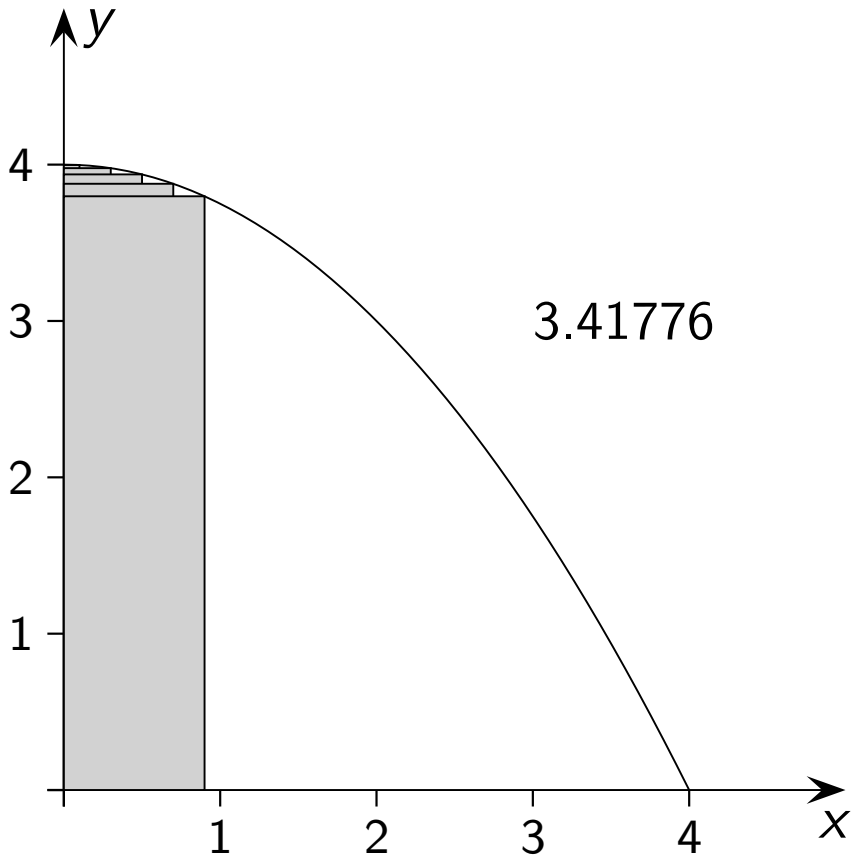
$f(x) = -\frac{1}{4}x^2 + 4$



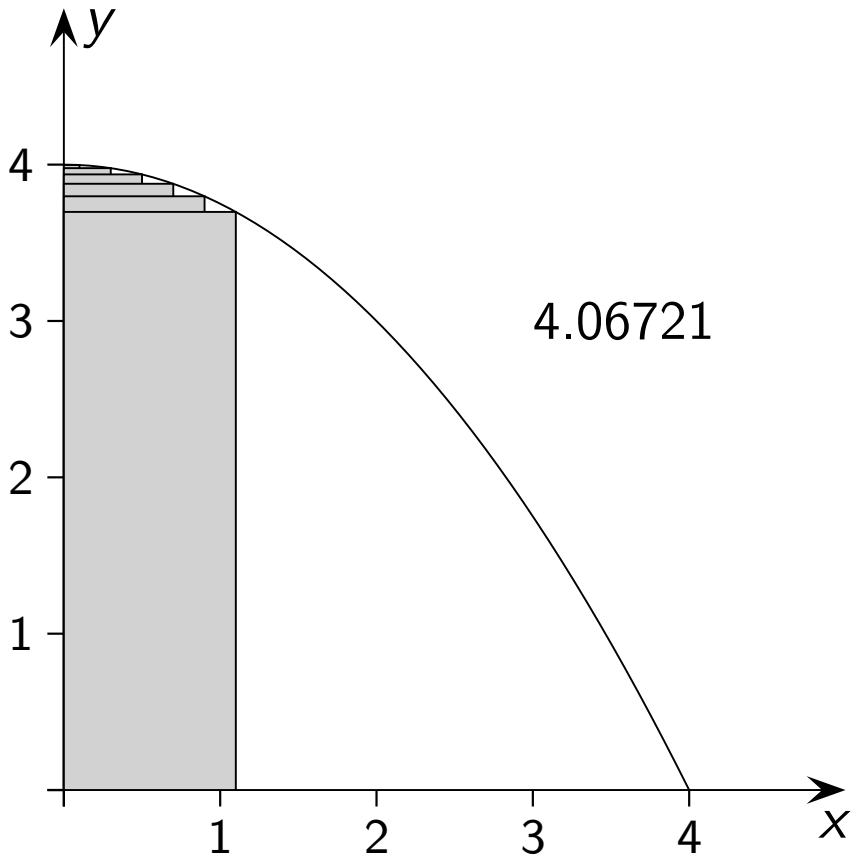
$f(x) = -\frac{1}{4}x^2 + 4$



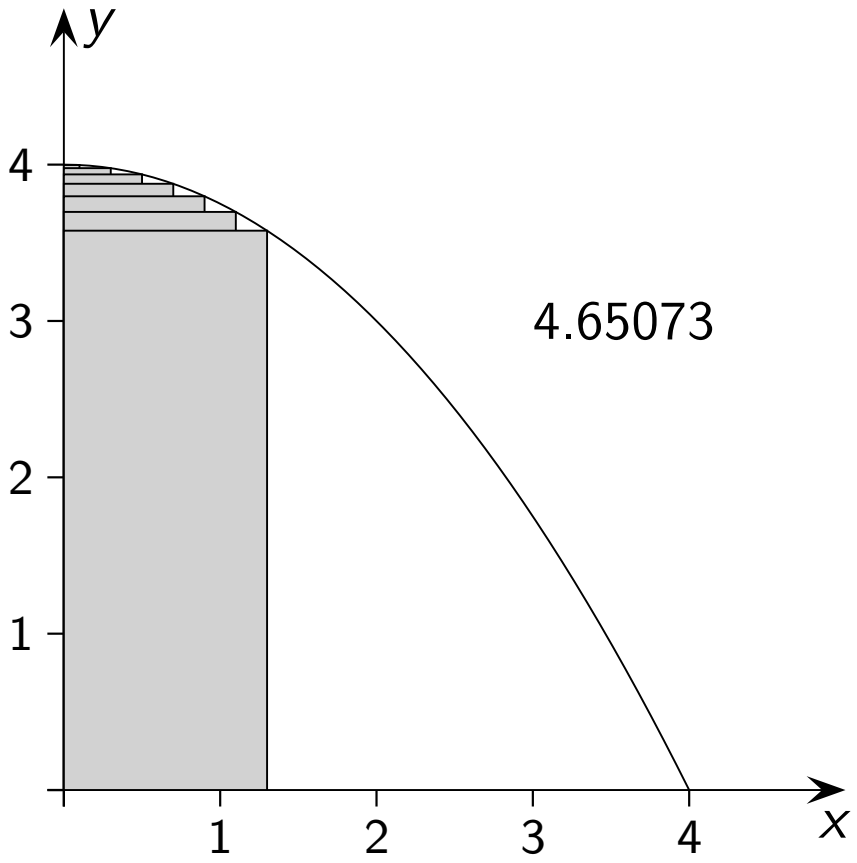
$f(x) = -\frac{1}{4}x^2 + 4$



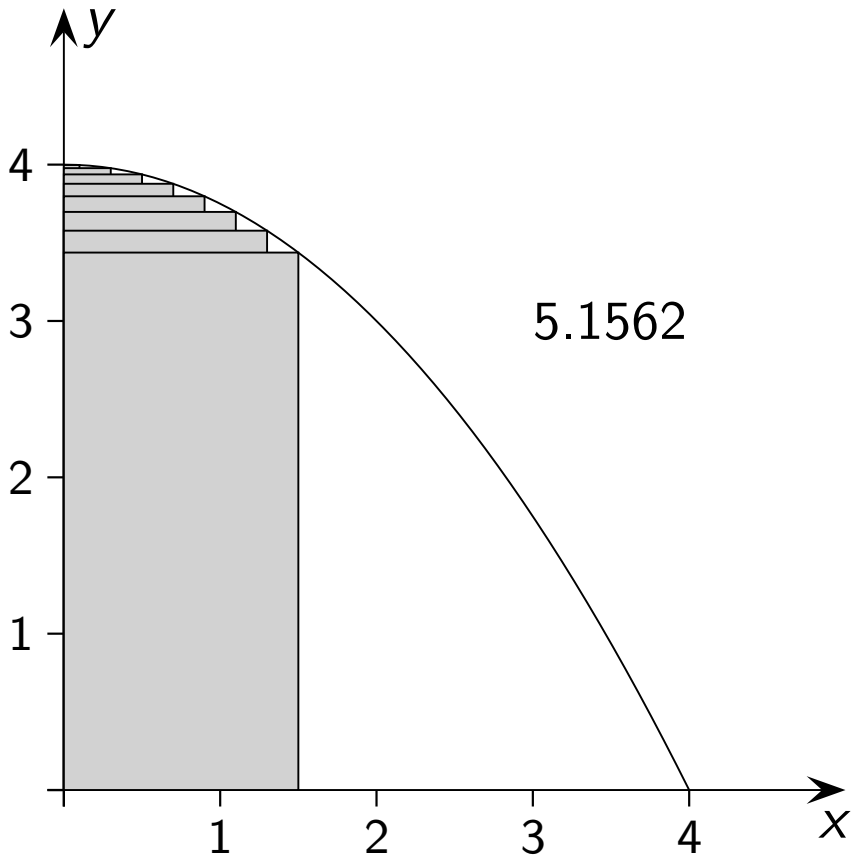
$f(x) = -\frac{1}{4}x^2 + 4$



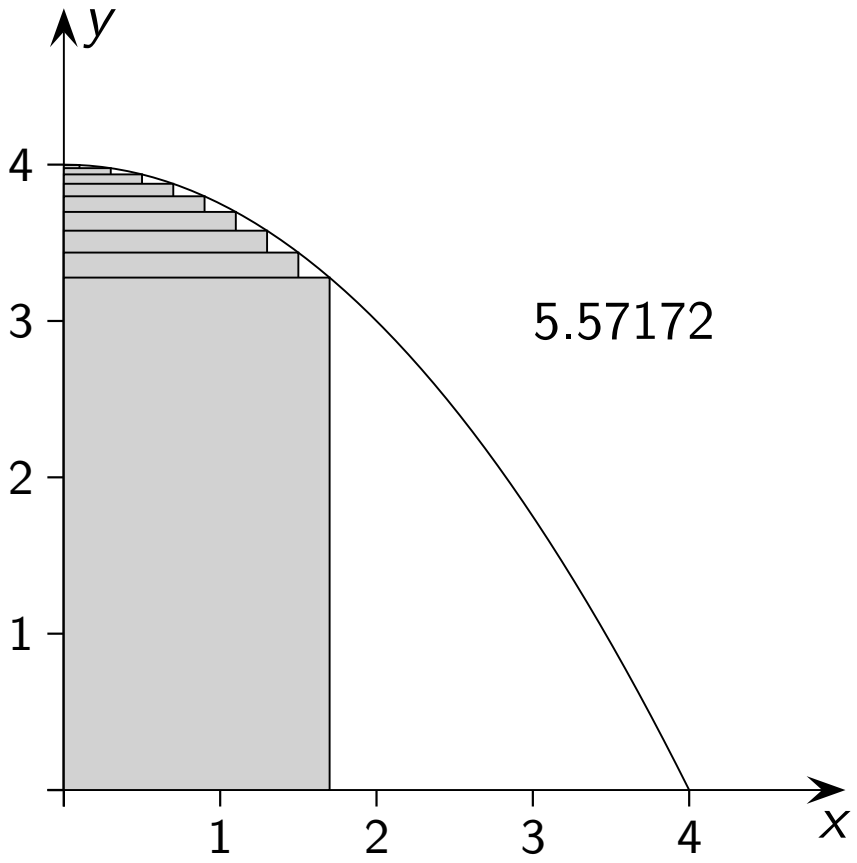
$f(x) = -\frac{1}{4}x^2 + 4$



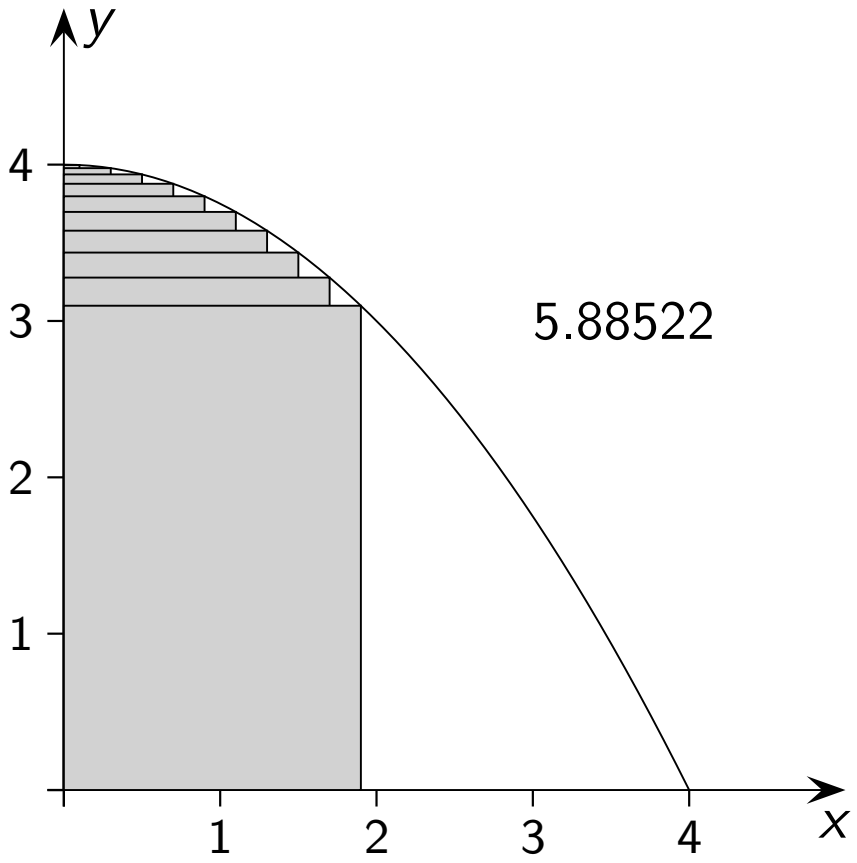
$f(x) = -\frac{1}{4}x^2 + 4$



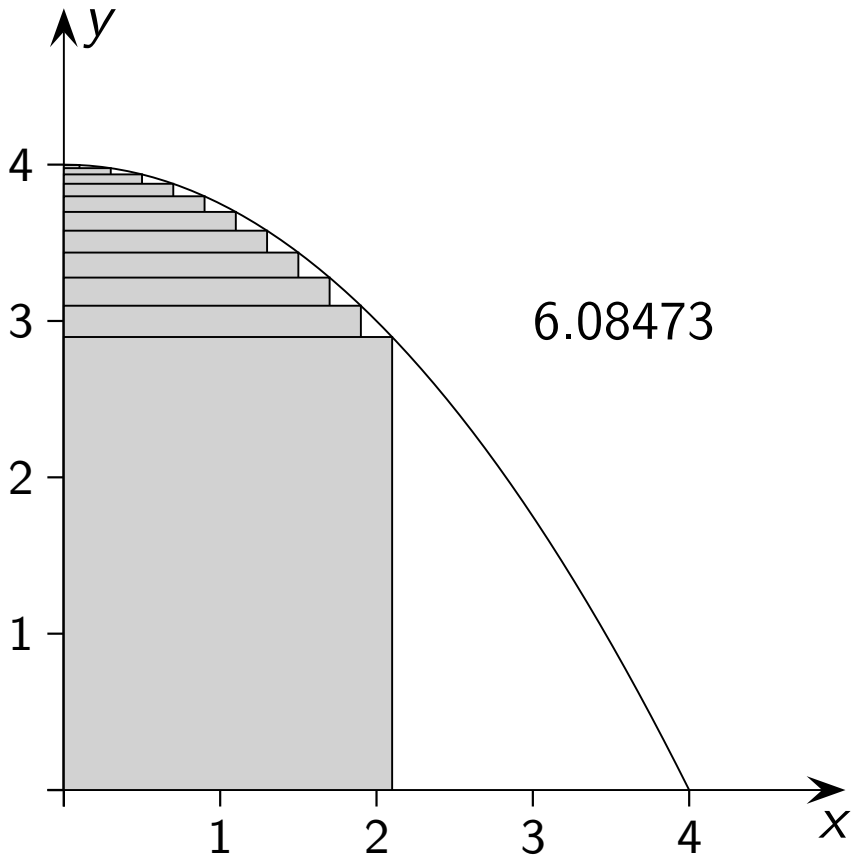
$f(x) = -\frac{1}{4}x^2 + 4$



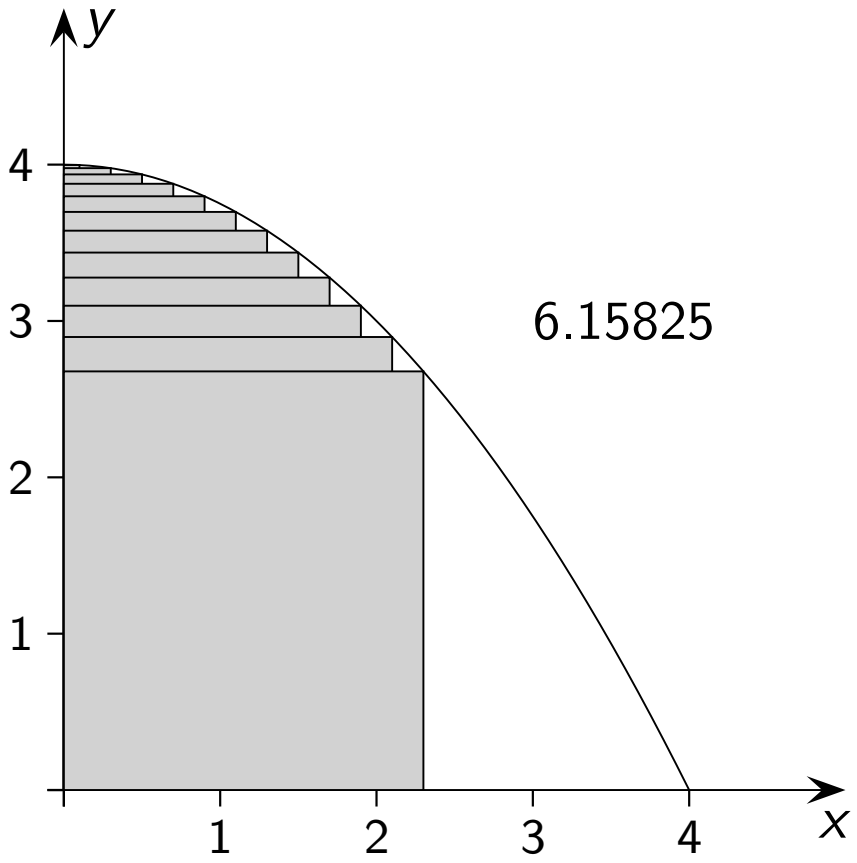
$f(x) = -\frac{1}{4}x^2 + 4$



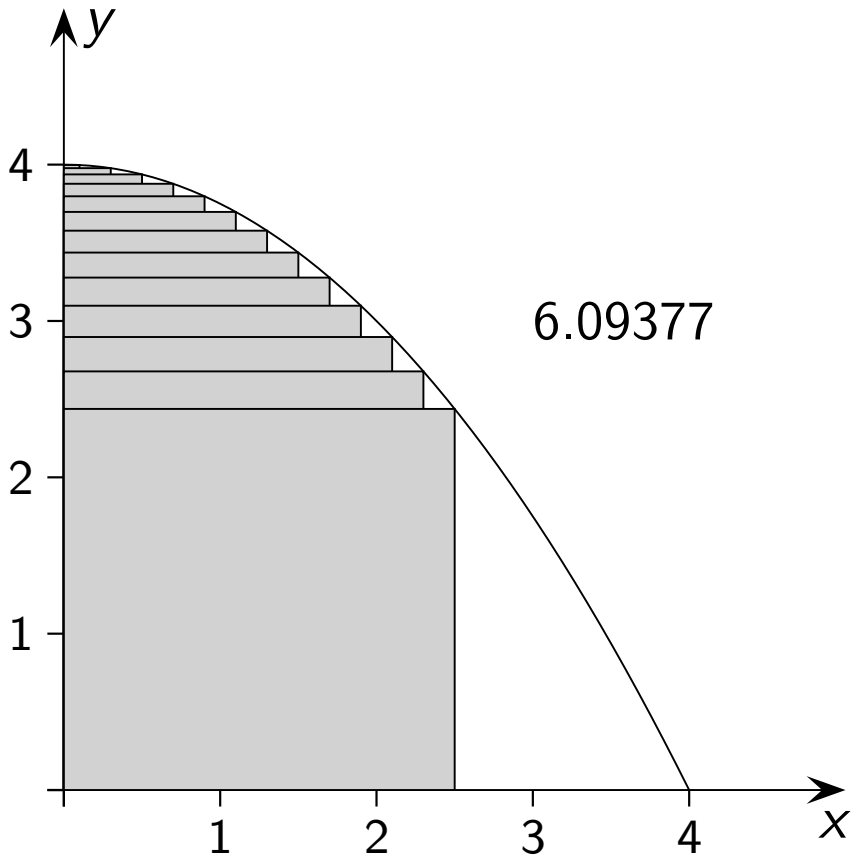
$f(x) = -\frac{1}{4}x^2 + 4$



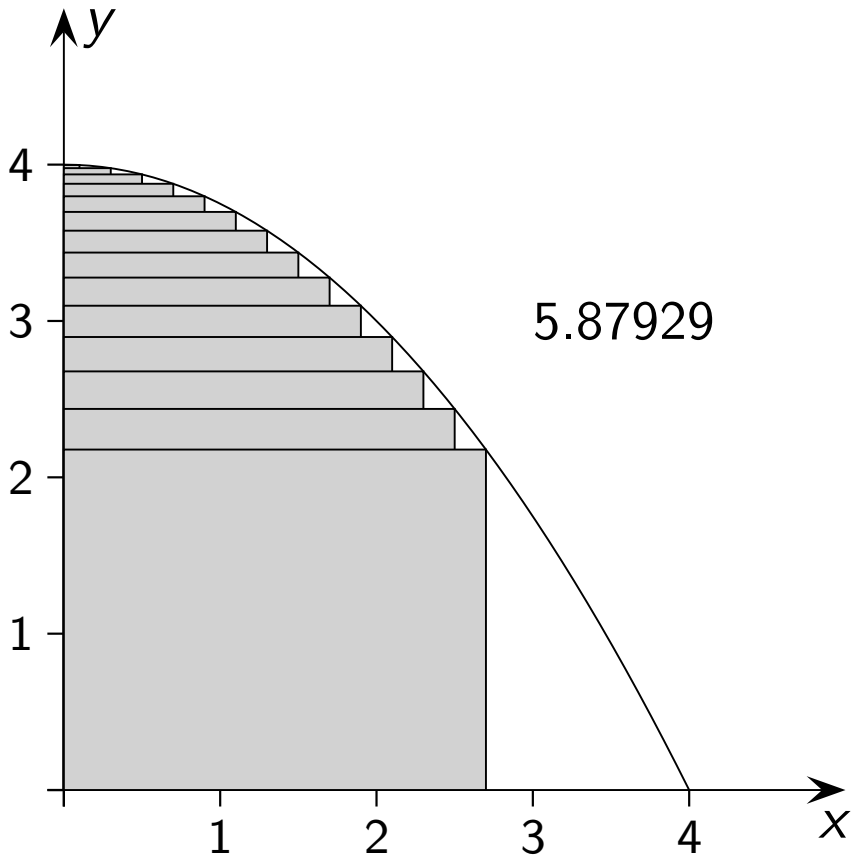
$f(x) = -\frac{1}{4}x^2 + 4$



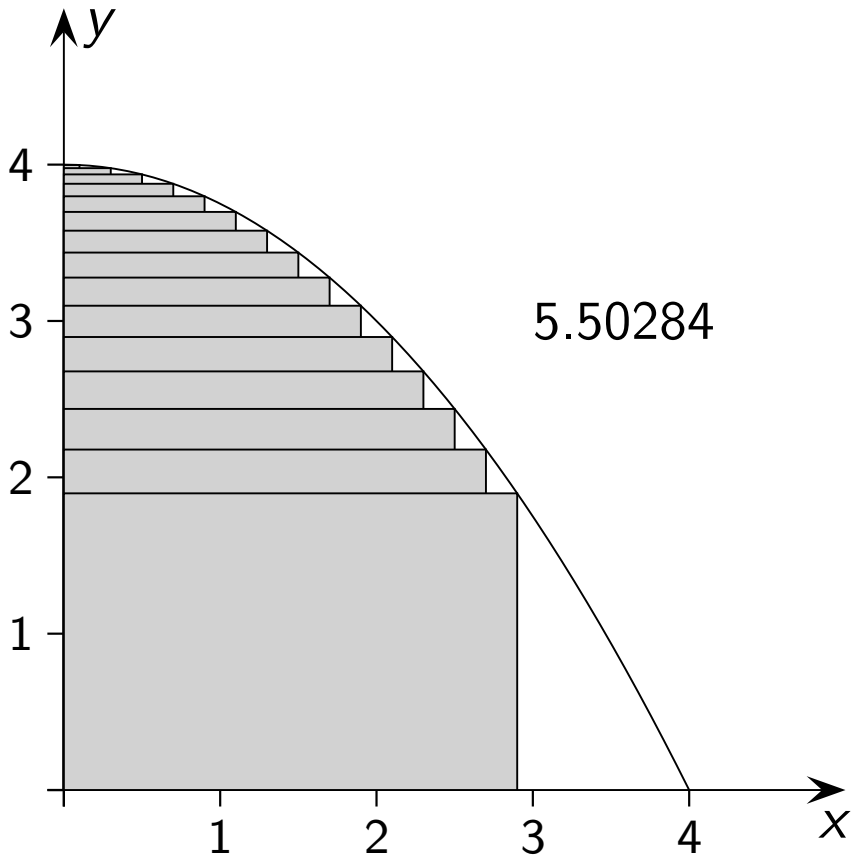
$f(x) = -\frac{1}{4}x^2 + 4$



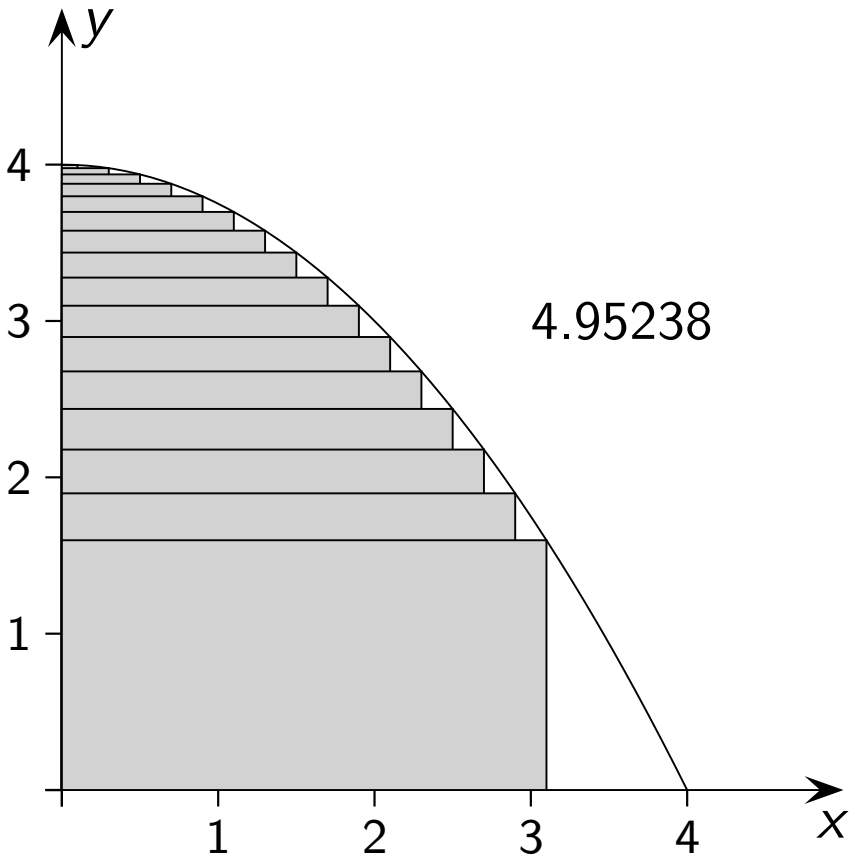
$f(x) = -\frac{1}{4}x^2 + 4$



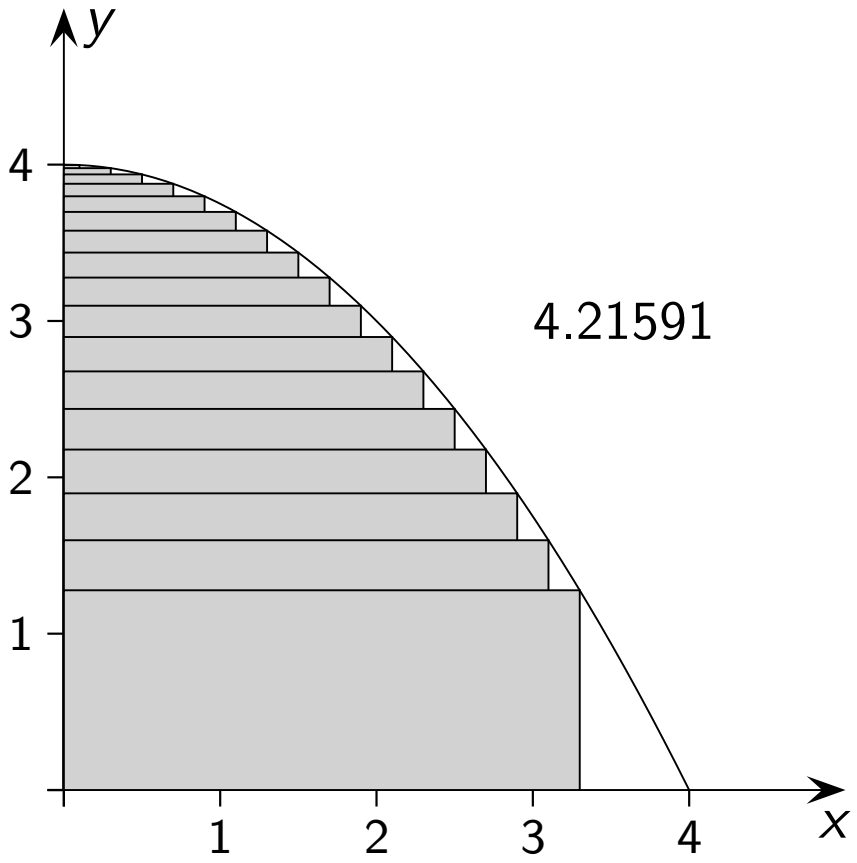
$f(x) = -\frac{1}{4}x^2 + 4$



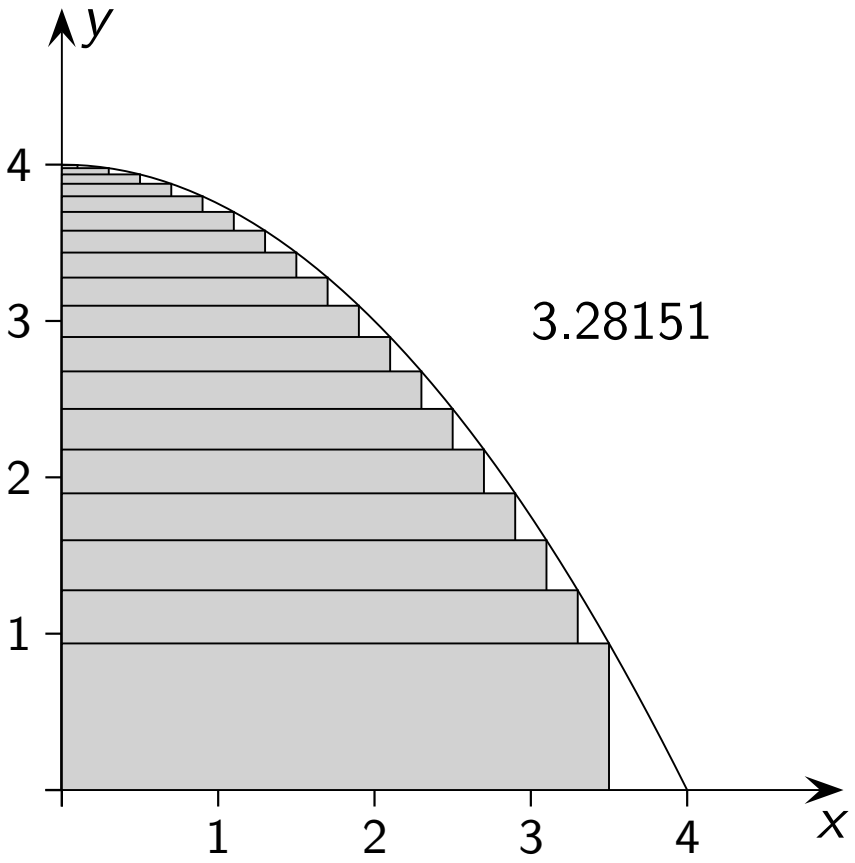
$f(x) = -\frac{1}{4}x^2 + 4$



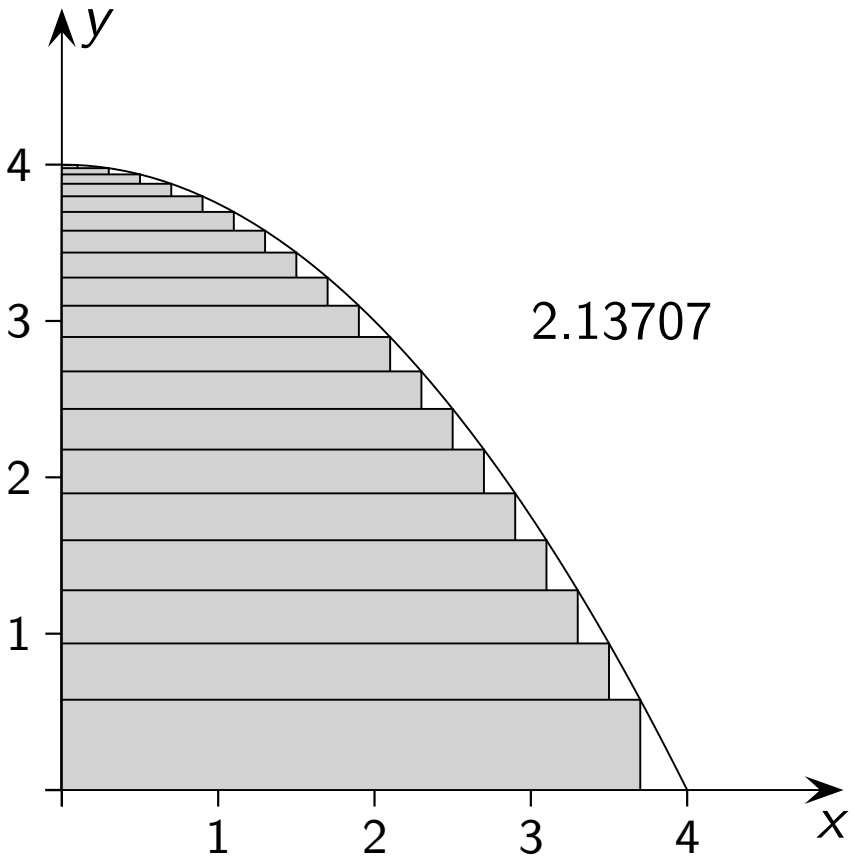
$f(x) = -\frac{1}{4}x^2 + 4$



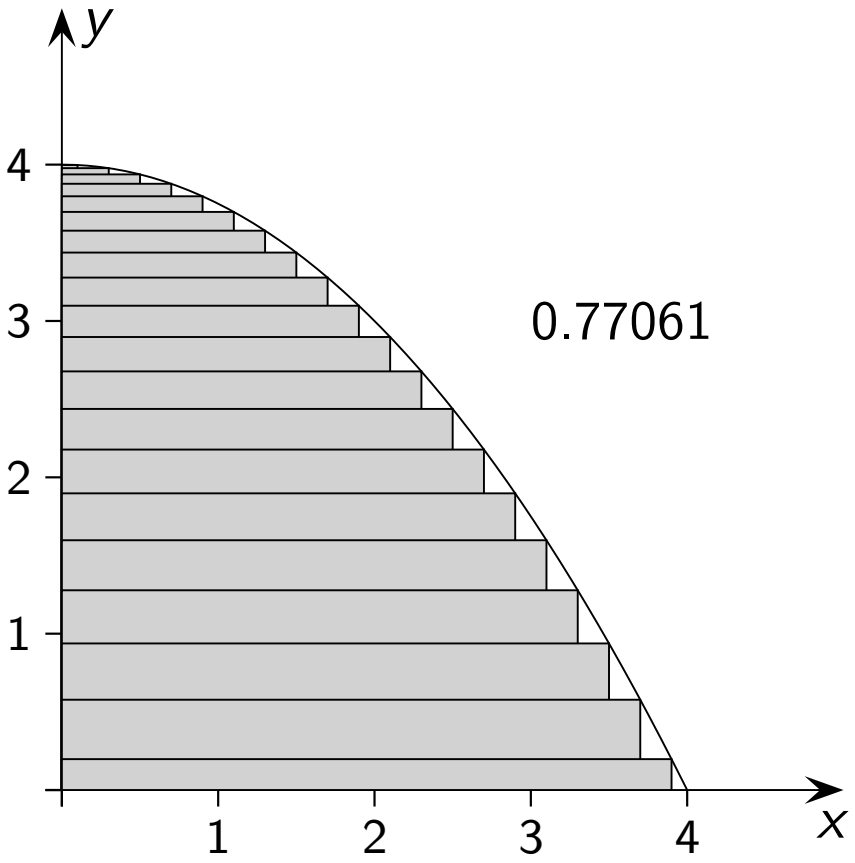
$f(x) = -\frac{1}{4}x^2 + 4$



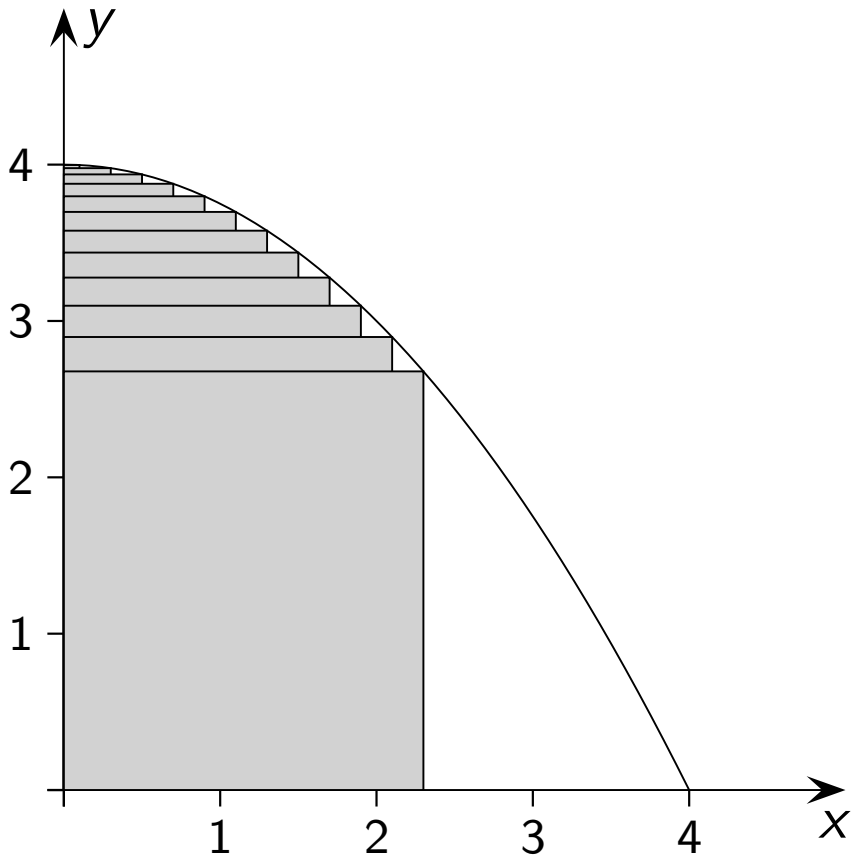
$f(x) = -\frac{1}{4}x^2 + 4$



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

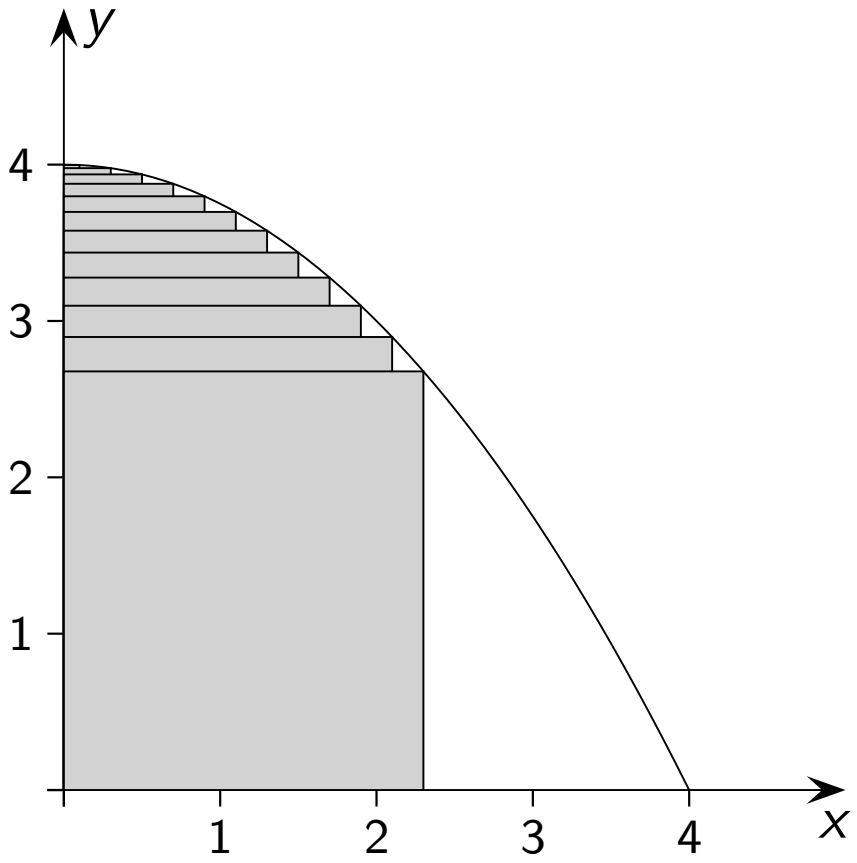


$f(x) = -\frac{1}{4}x^2 + 4$



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

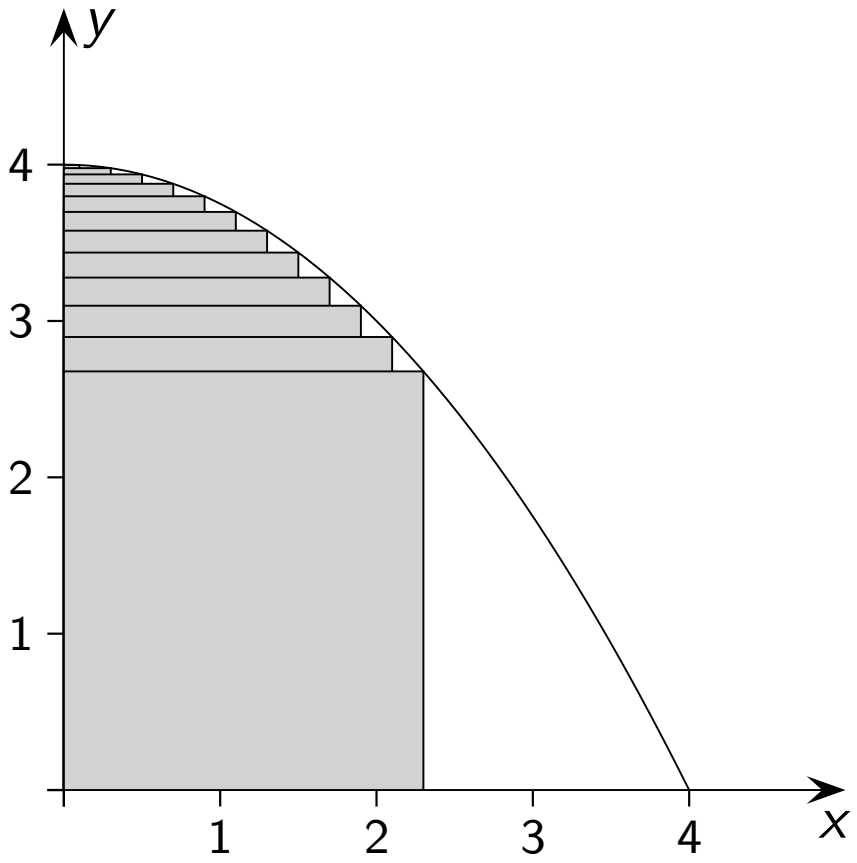
$$A(x) = x \cdot f(x)$$



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

$$A(x) = x \cdot f(x)$$

$$A'(x) = ?$$

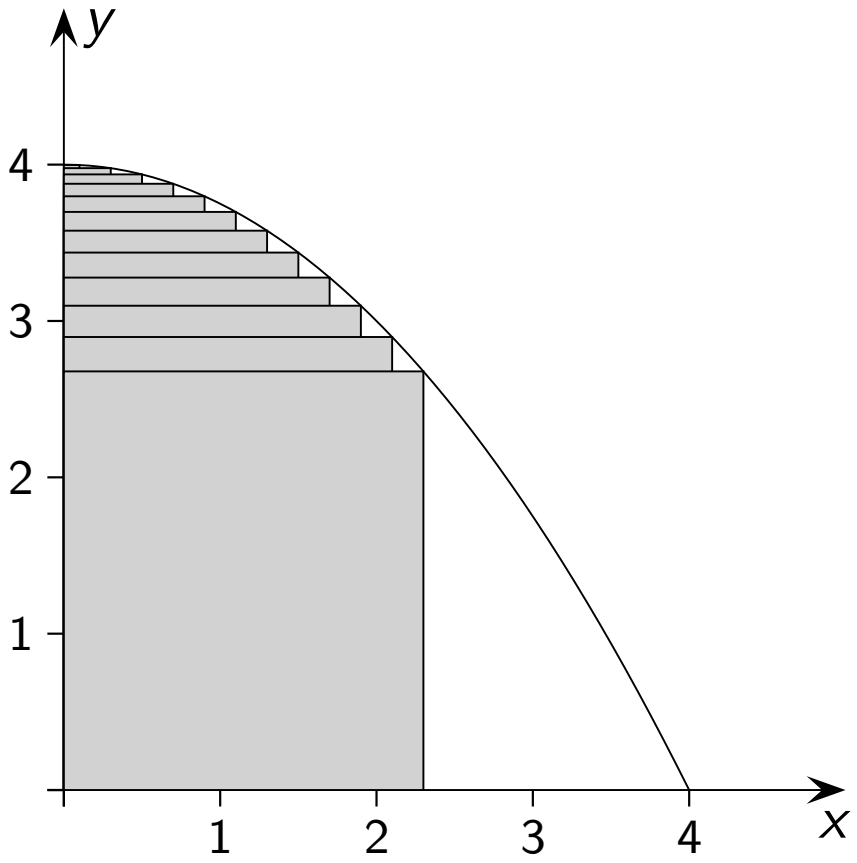


$f(x) = -\frac{1}{4}x^2 + 4$

$$A(x) = x \cdot f(x)$$

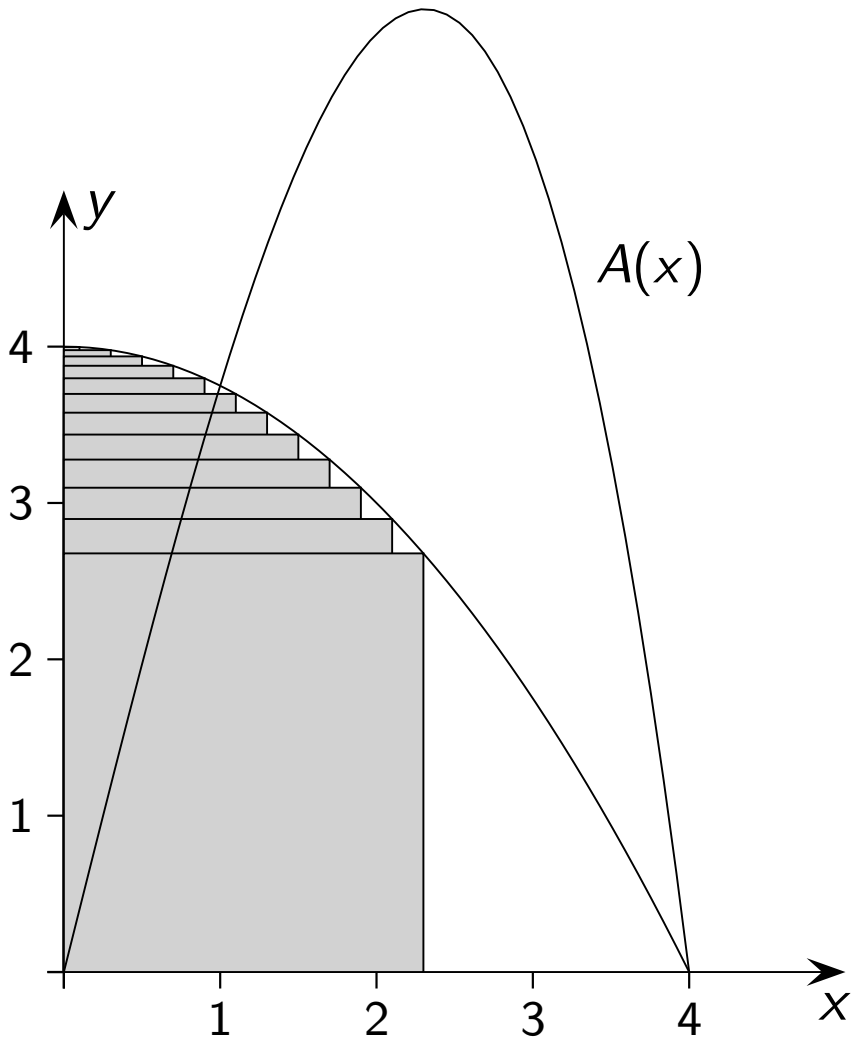
$$A'(x) = ?$$

$$A'(x) = 0$$



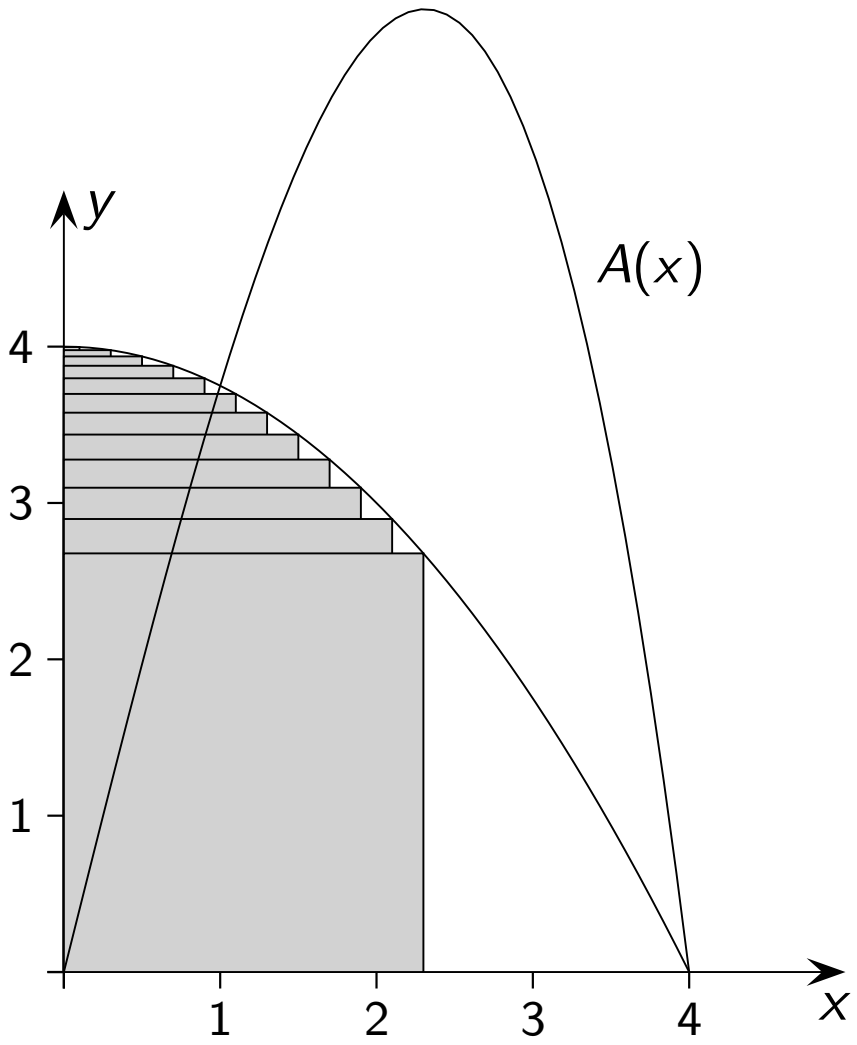
$f(x) = -\frac{1}{4}x^2 + 4$

$$A(x) = x \cdot f(x)$$
$$A'(x) = -\frac{3}{4}x^2 + 4$$
$$A'(x) = 0$$



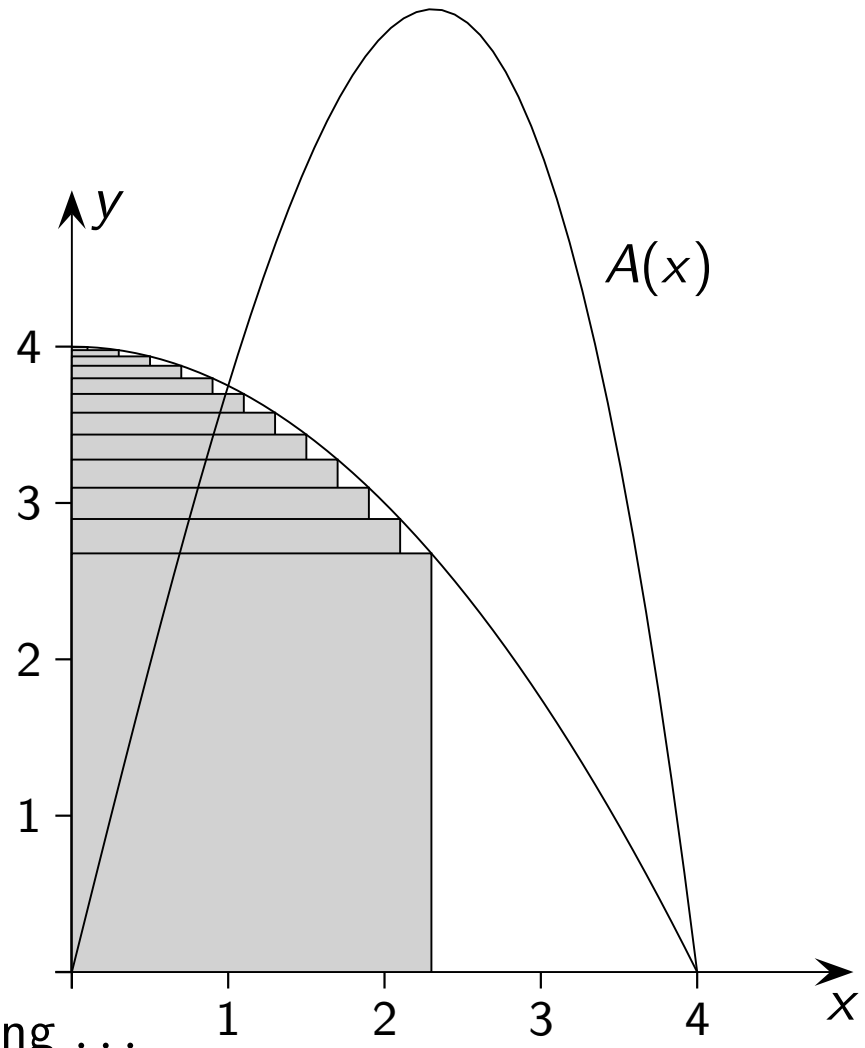
$f(x) = -\frac{1}{4}x^2 + 4$

$$A(x) = x \cdot f(x)$$
$$A'(x) = -\frac{3}{4}x^2 + 4$$
$$A'(x) = 0$$
$$x_E = 2{,}31$$



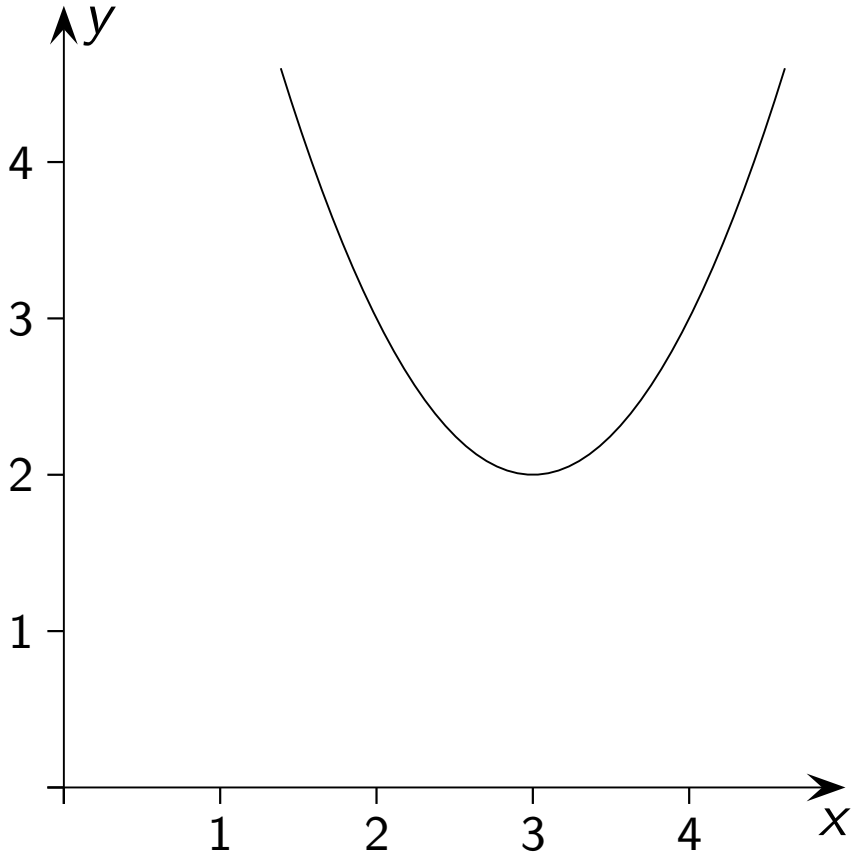
$f(x) = -\frac{1}{4}x^2 + 4$

$$A(x) = x \cdot f(x)$$
$$A'(x) = -\frac{3}{4}x^2 + 4$$
$$A'(x) = 0$$
$$x_E = 2{,}31$$

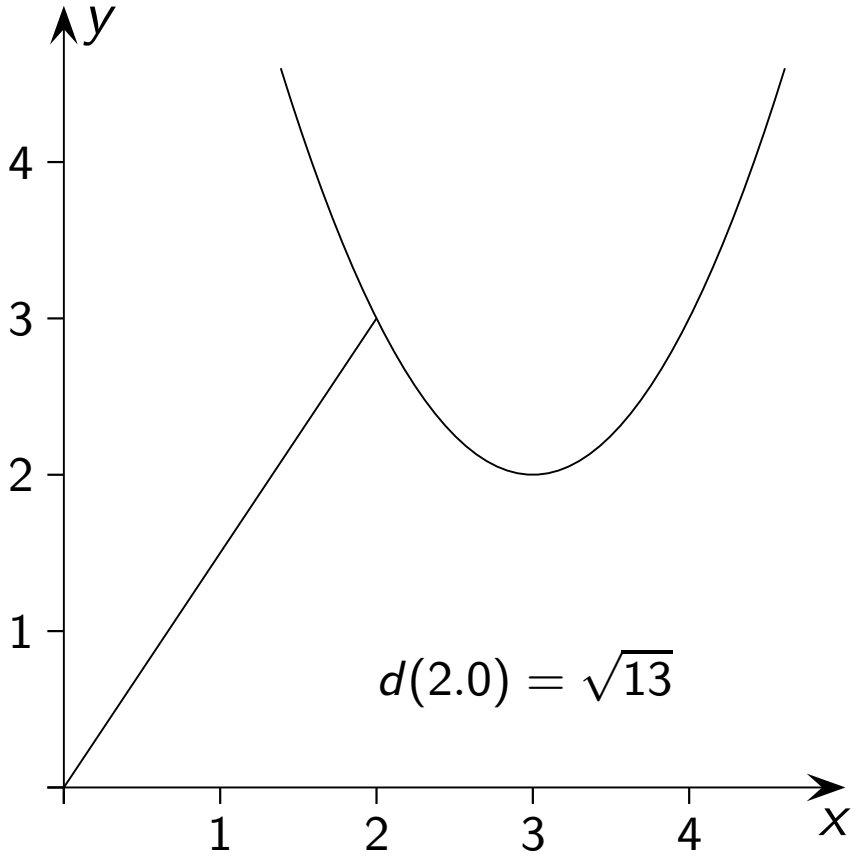


Maximum an der Stelle x_E, Begründung ...

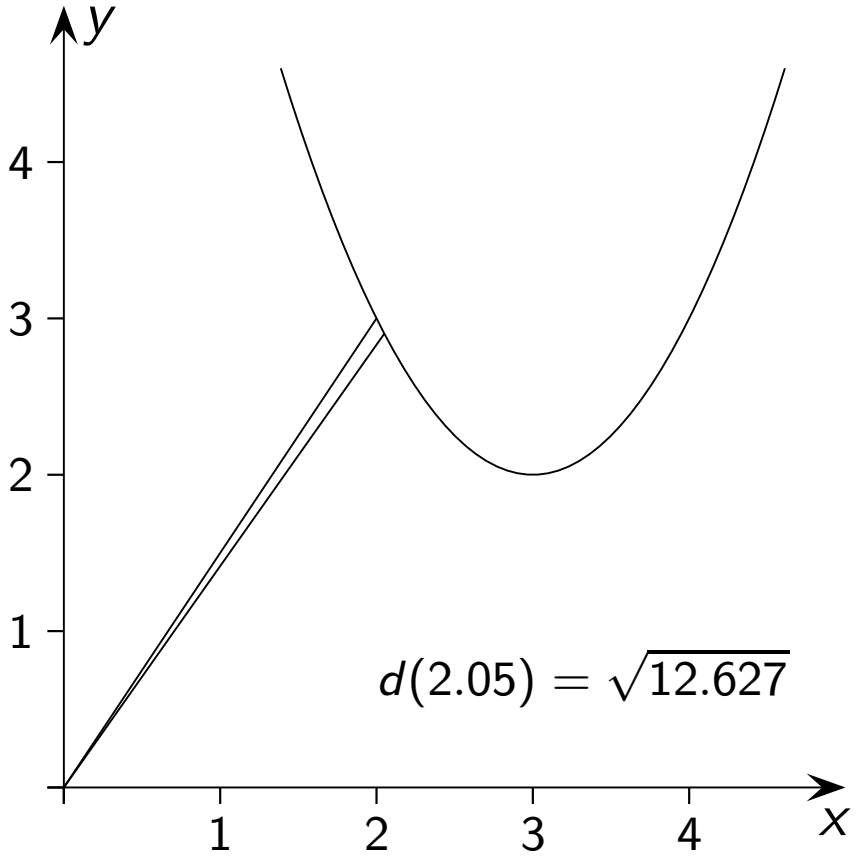
$f(x) = (x-3)^2 + 2$



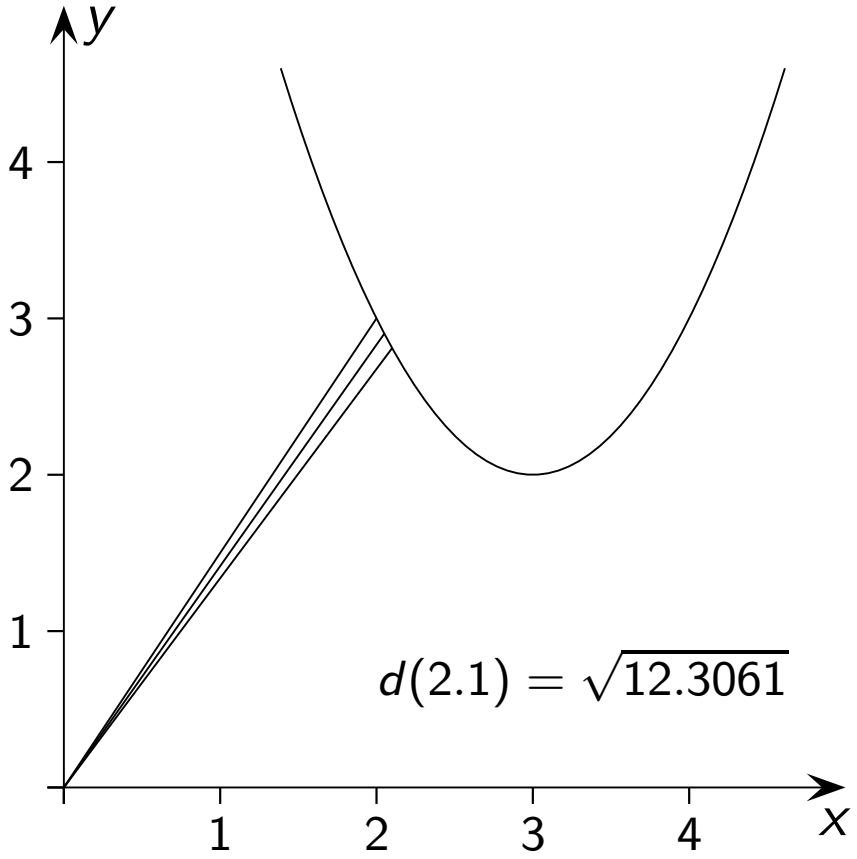
$f(x) = (x-3)^2 + 2$



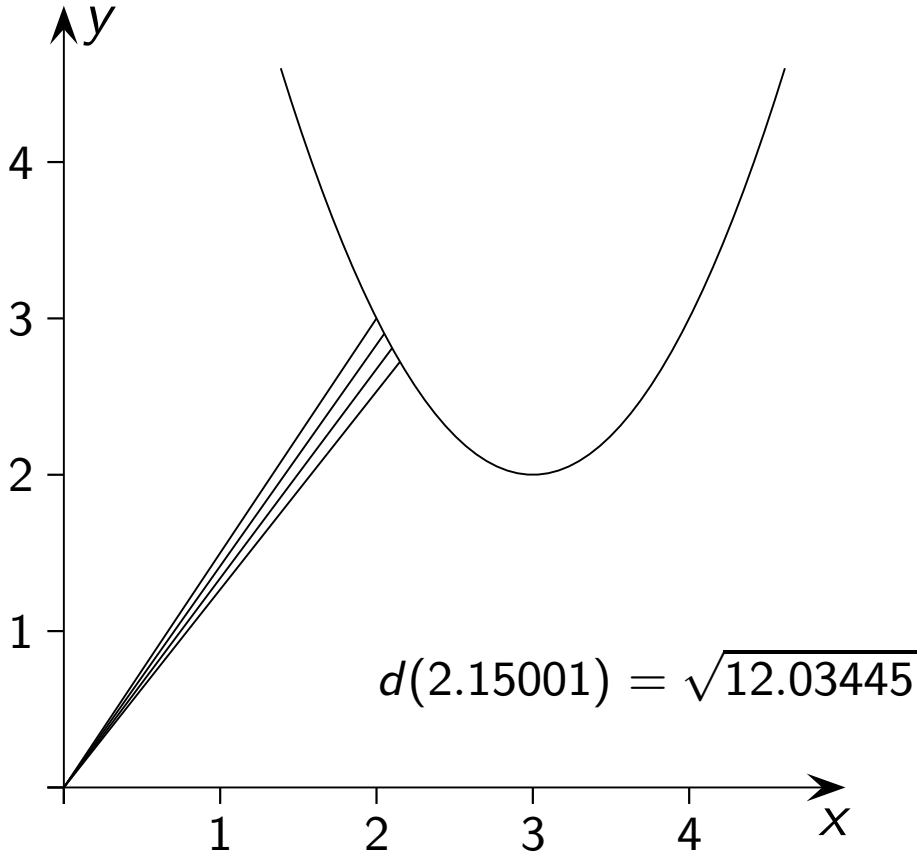
$f(x) = (x-3)^2 + 2$



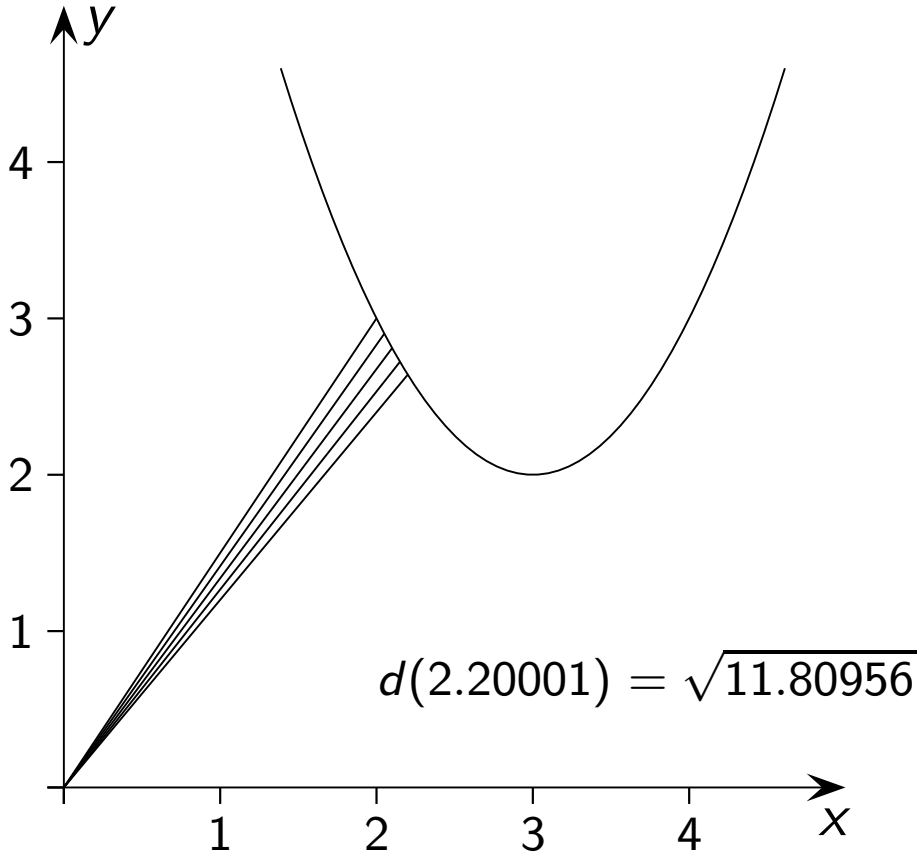
$f(x) = (x-3)^2 + 2$



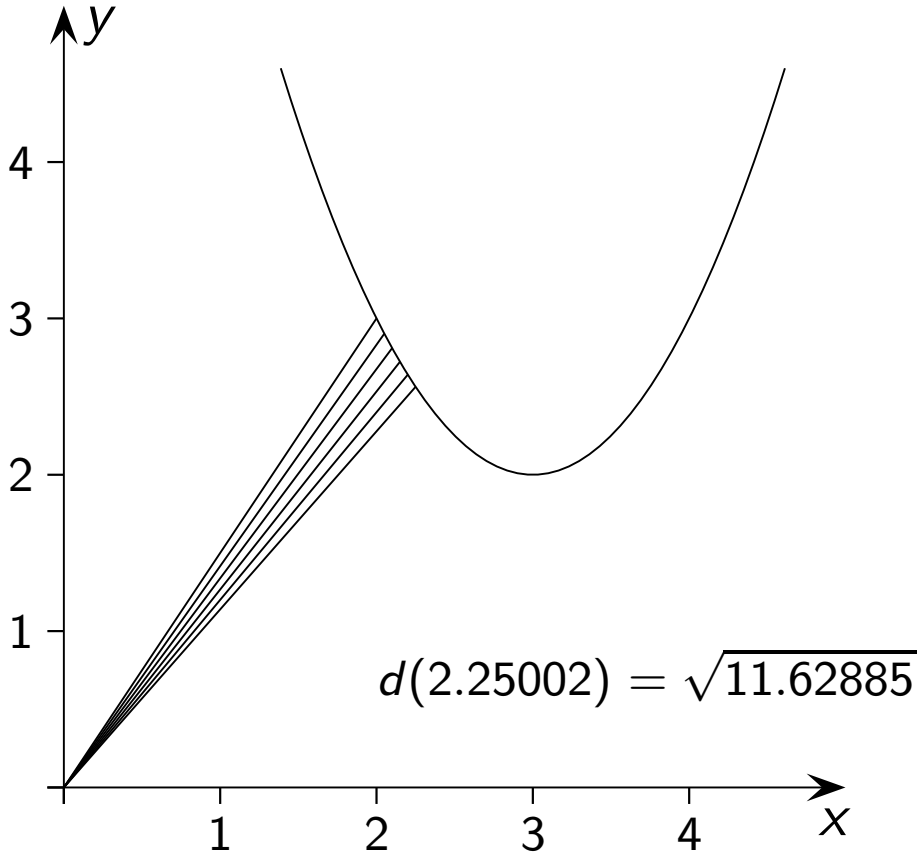
$f(x) = (x-3)^2 + 2$



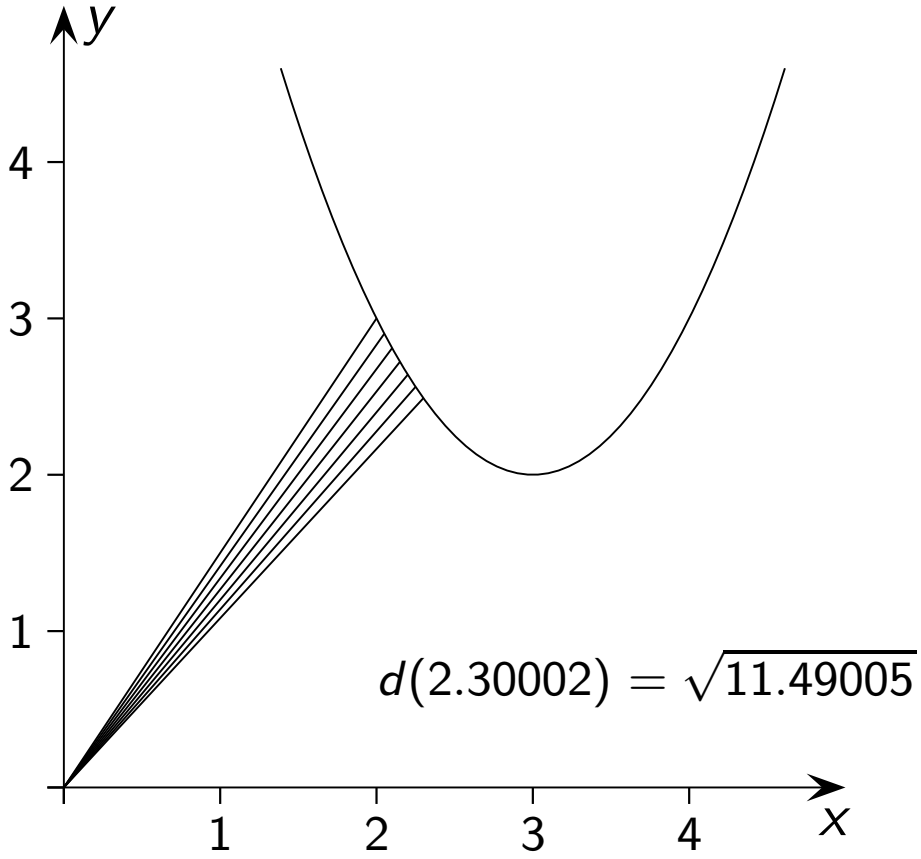
$f(x) = (x-3)^2 + 2$



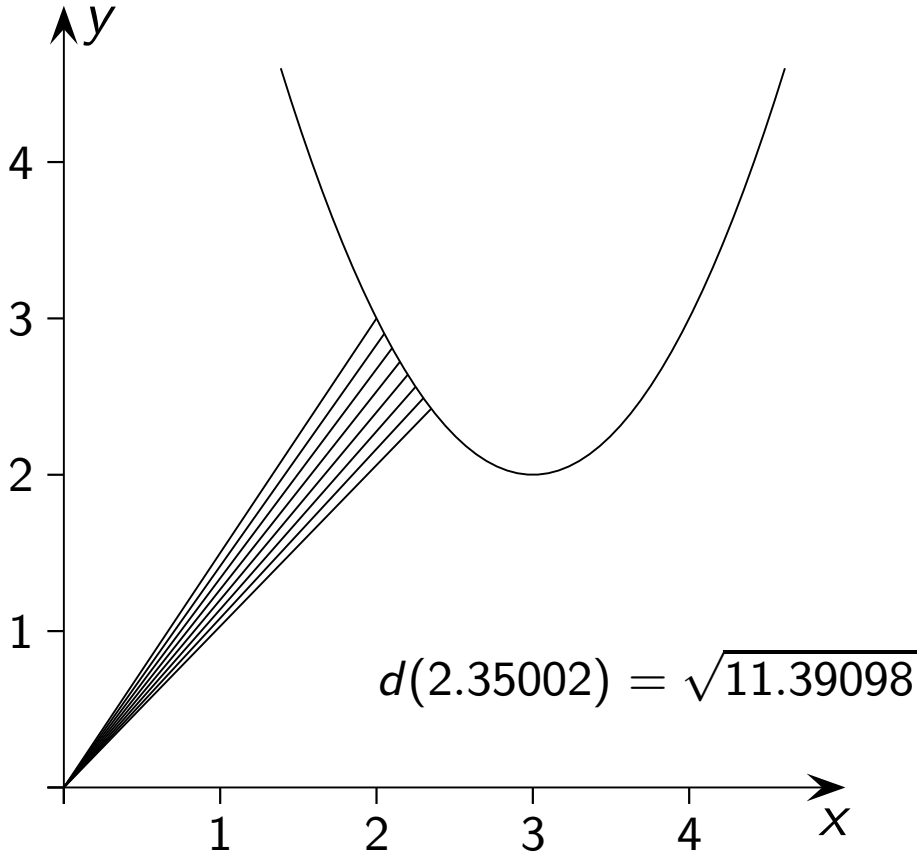
$f(x) = (x-3)^2 + 2$



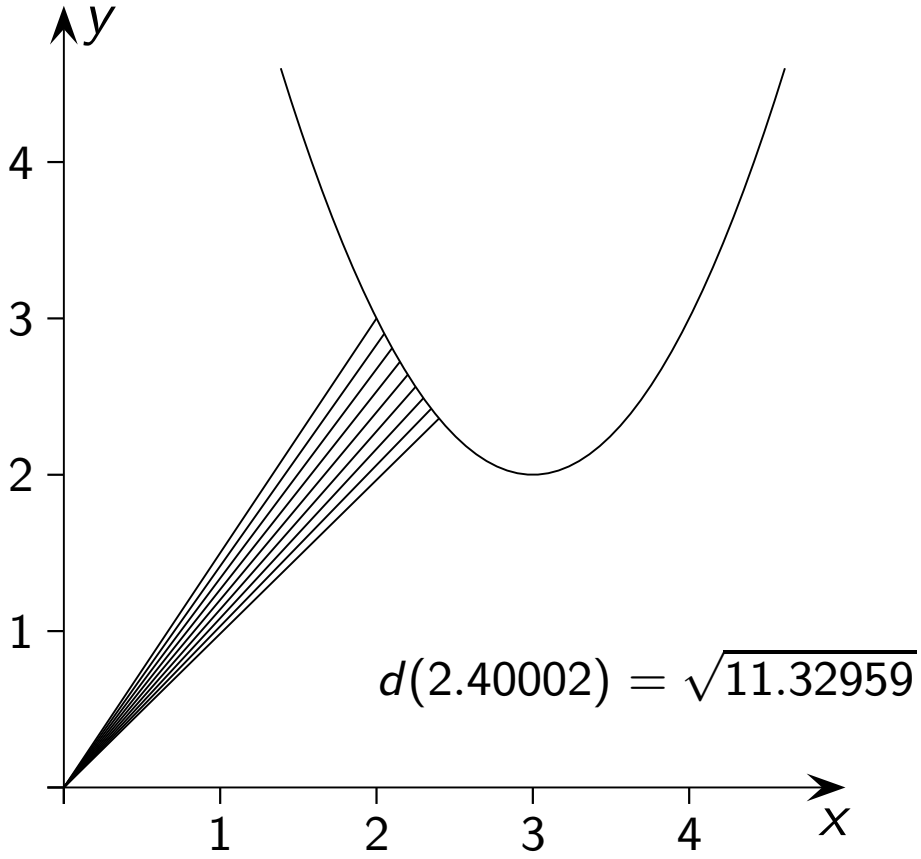
$f(x) = (x-3)^2 + 2$



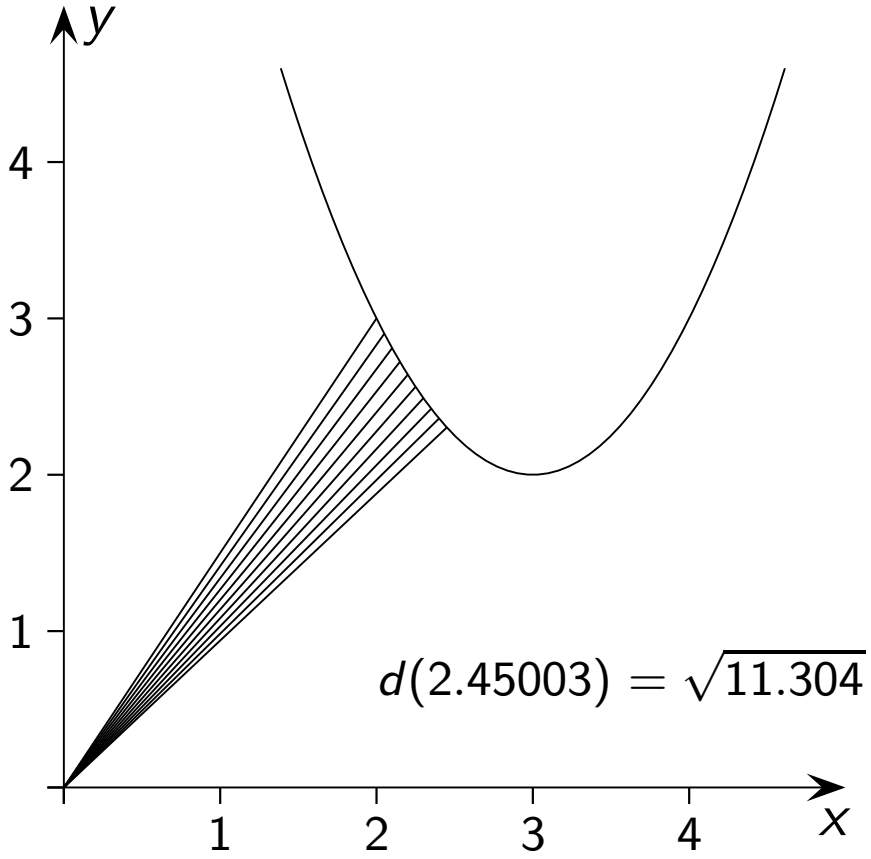
$f(x) = (x-3)^2 + 2$



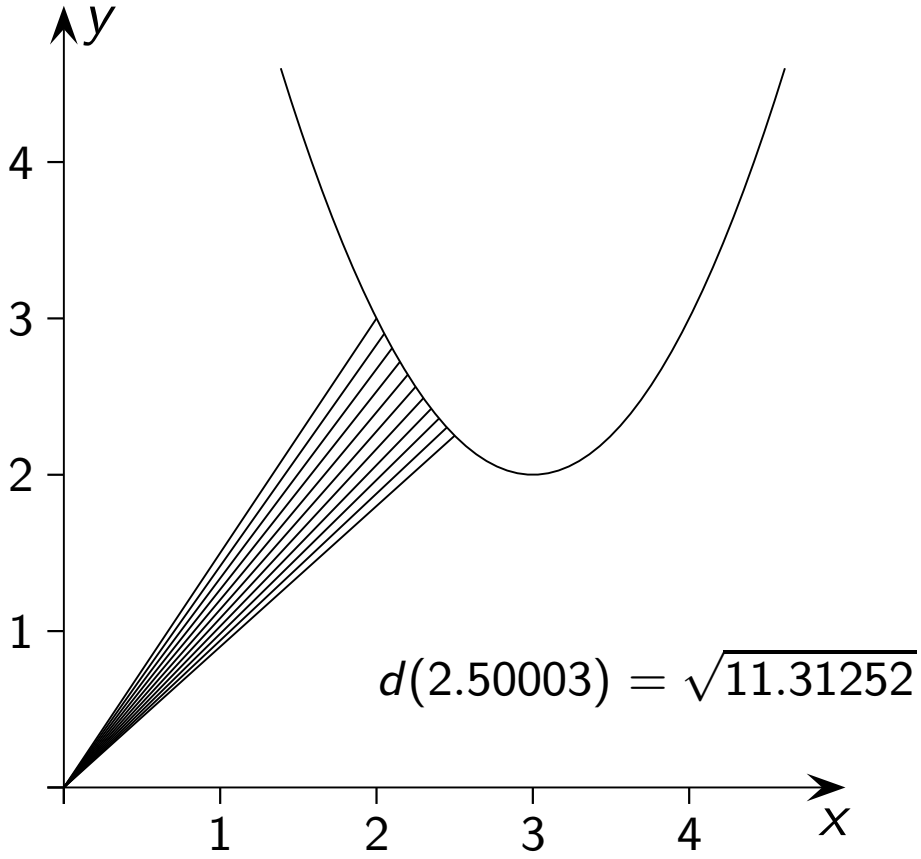
$f(x) = (x-3)^2 + 2$



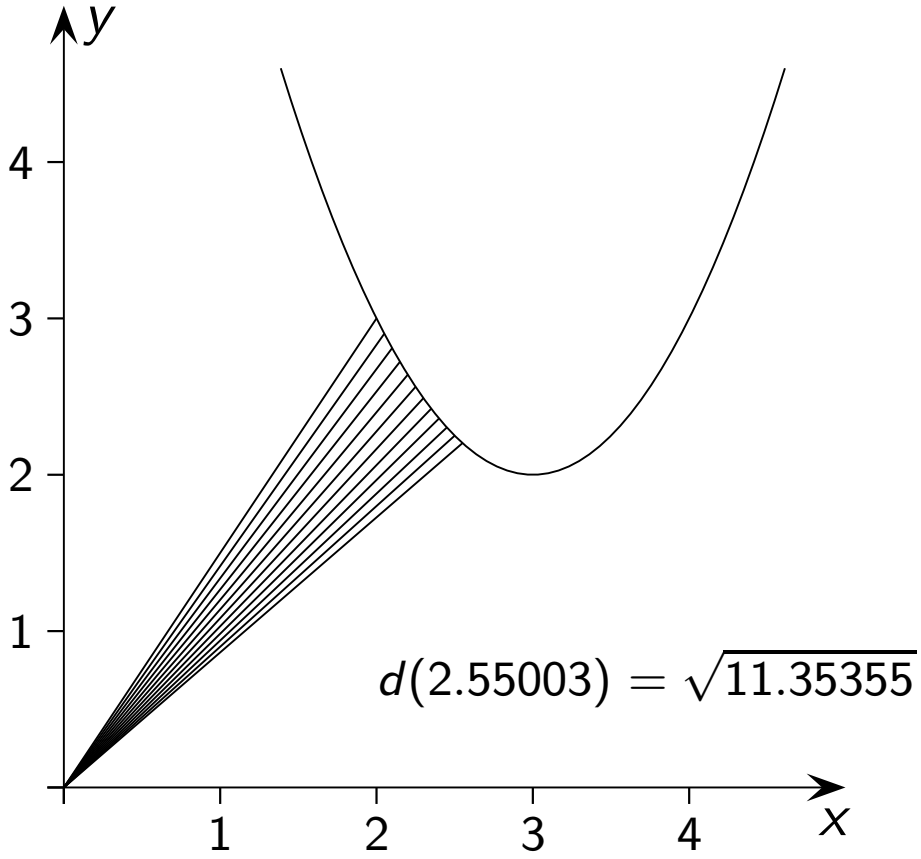
$f(x) = (x-3)^2 + 2$



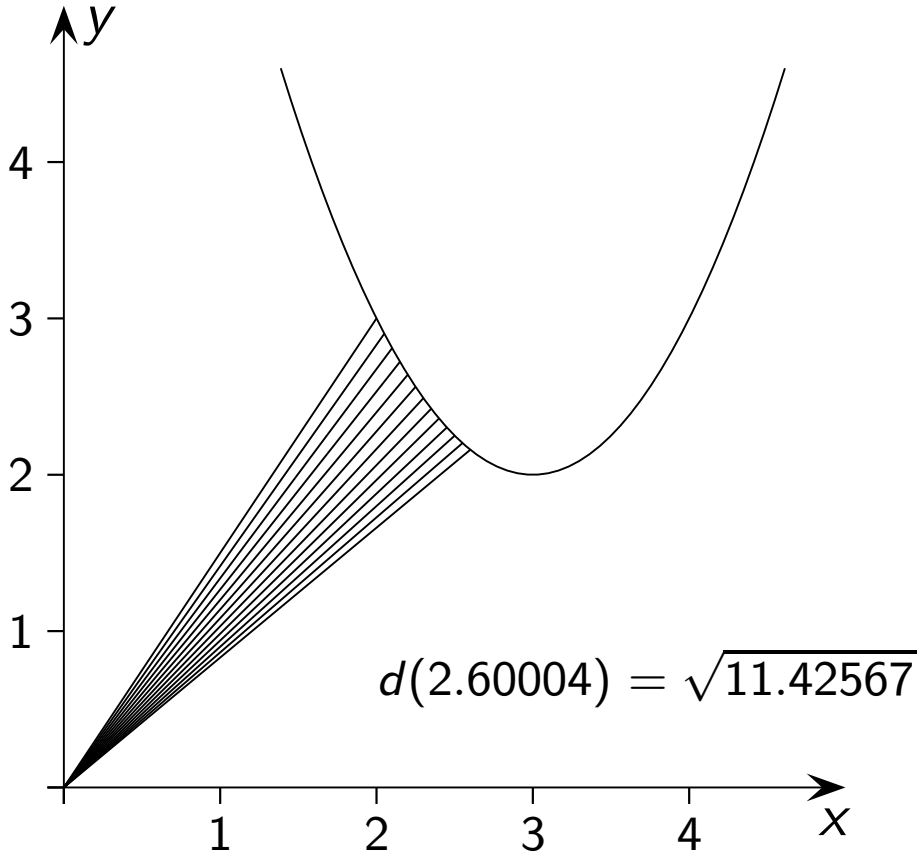
$f(x) = (x-3)^2 + 2$



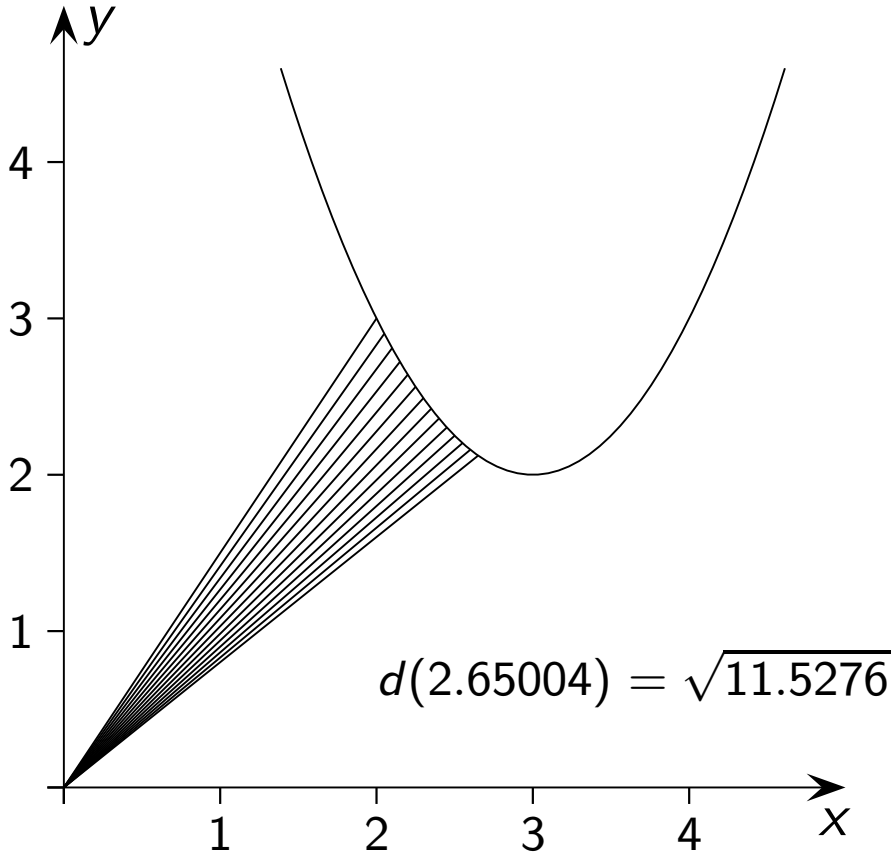
$f(x) = (x-3)^2 + 2$



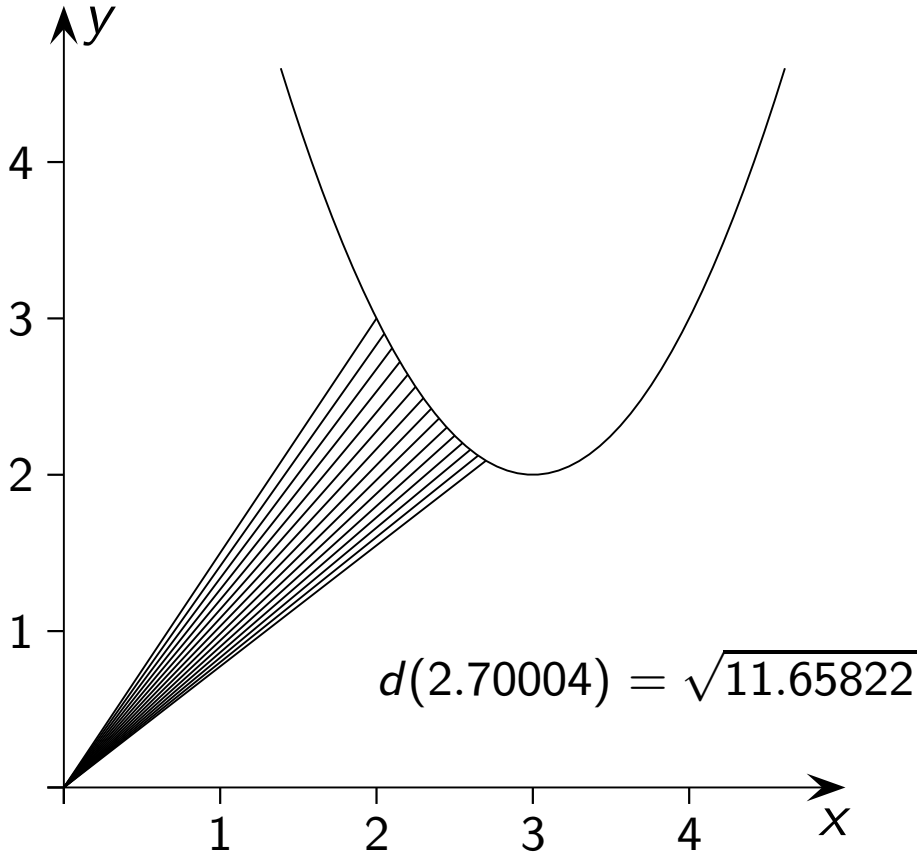
$f(x) = (x-3)^2 + 2$



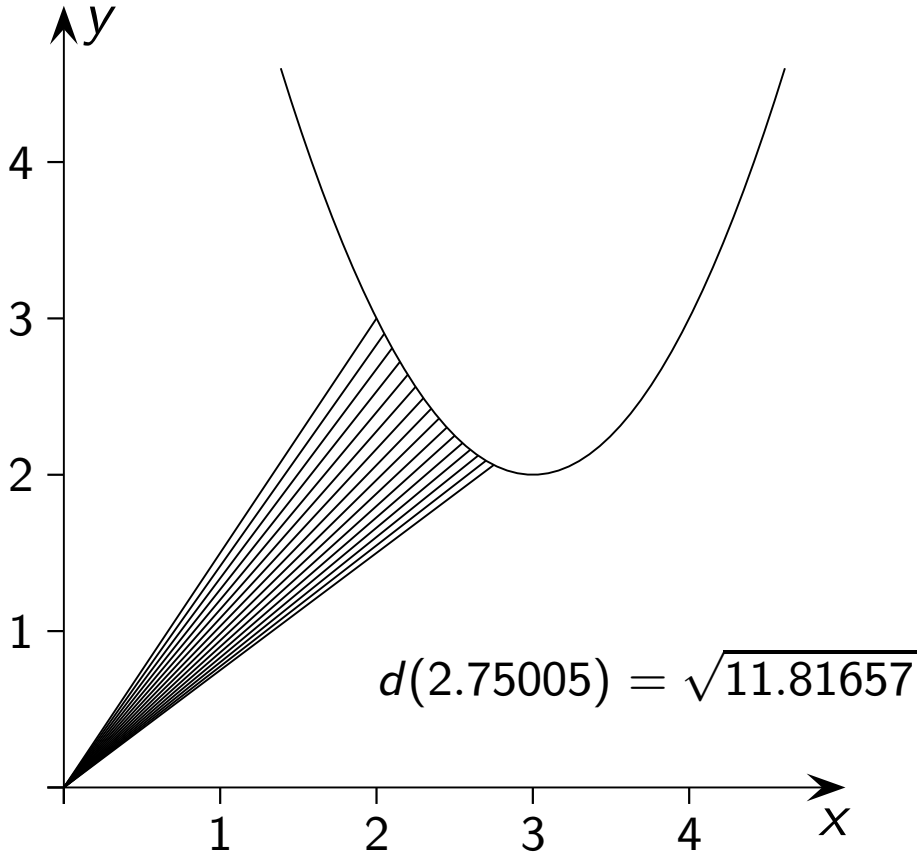
$f(x) = (x-3)^2 + 2$



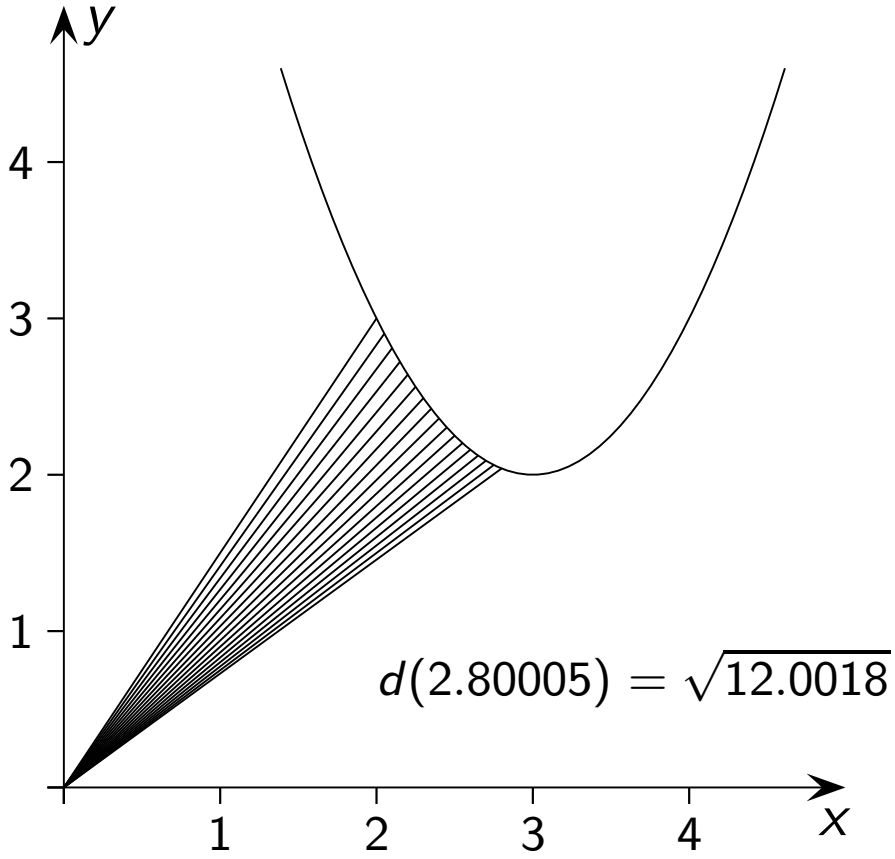
$f(x) = (x-3)^2 + 2$



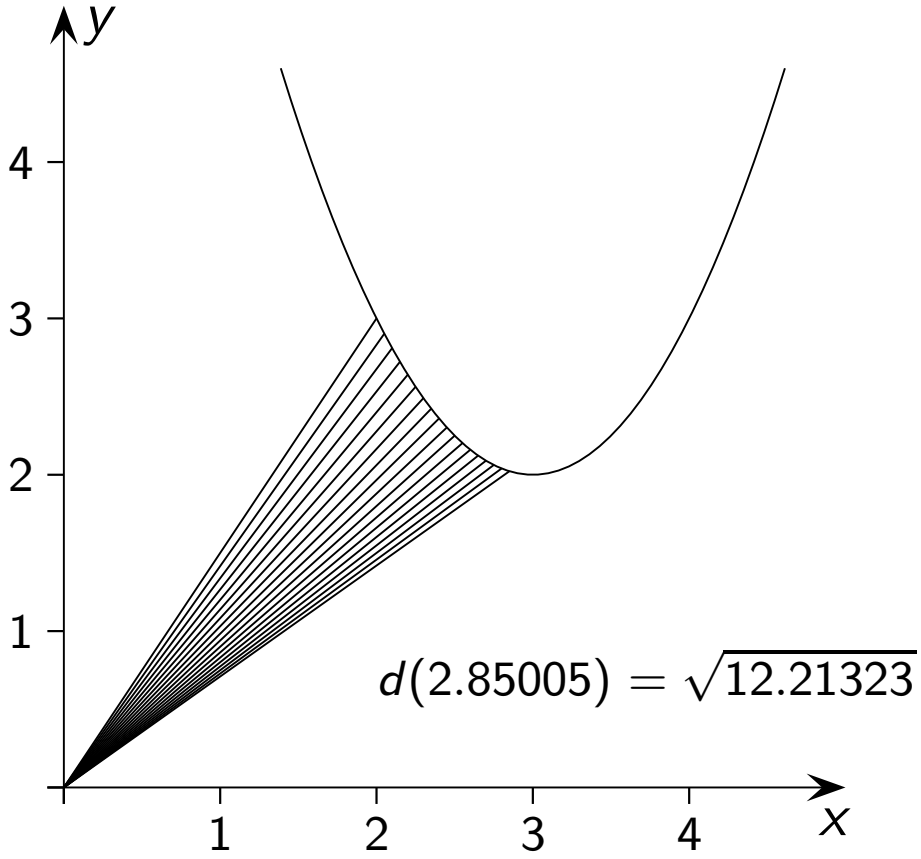
$f(x) = (x-3)^2 + 2$



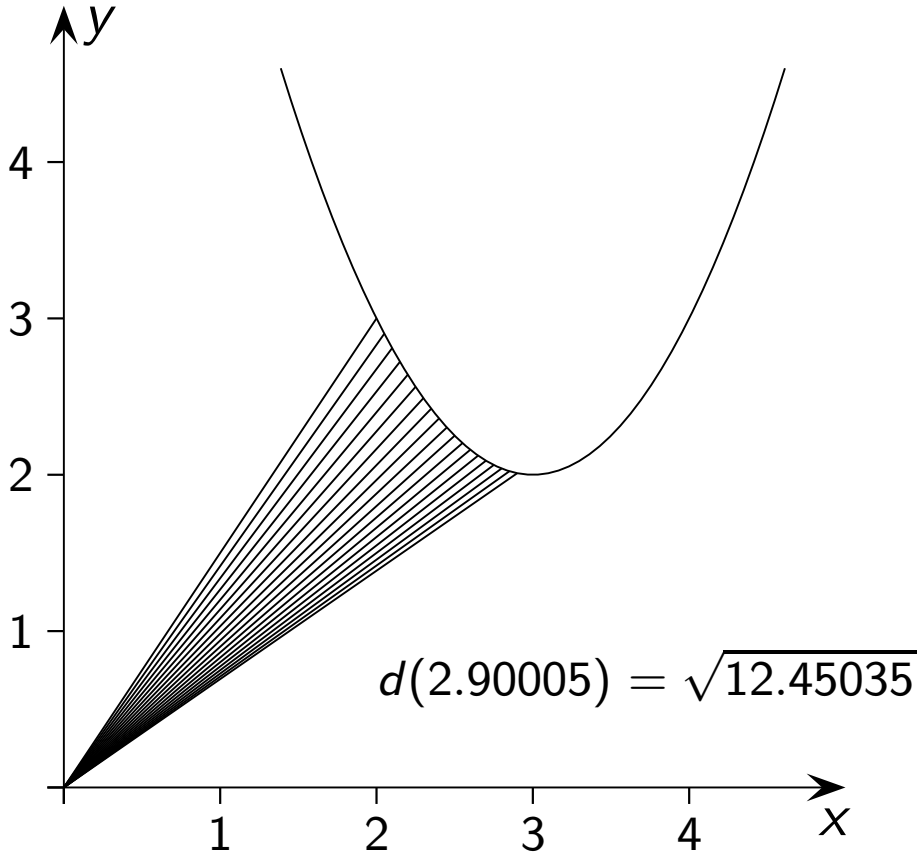
$f(x) = (x-3)^2 + 2$



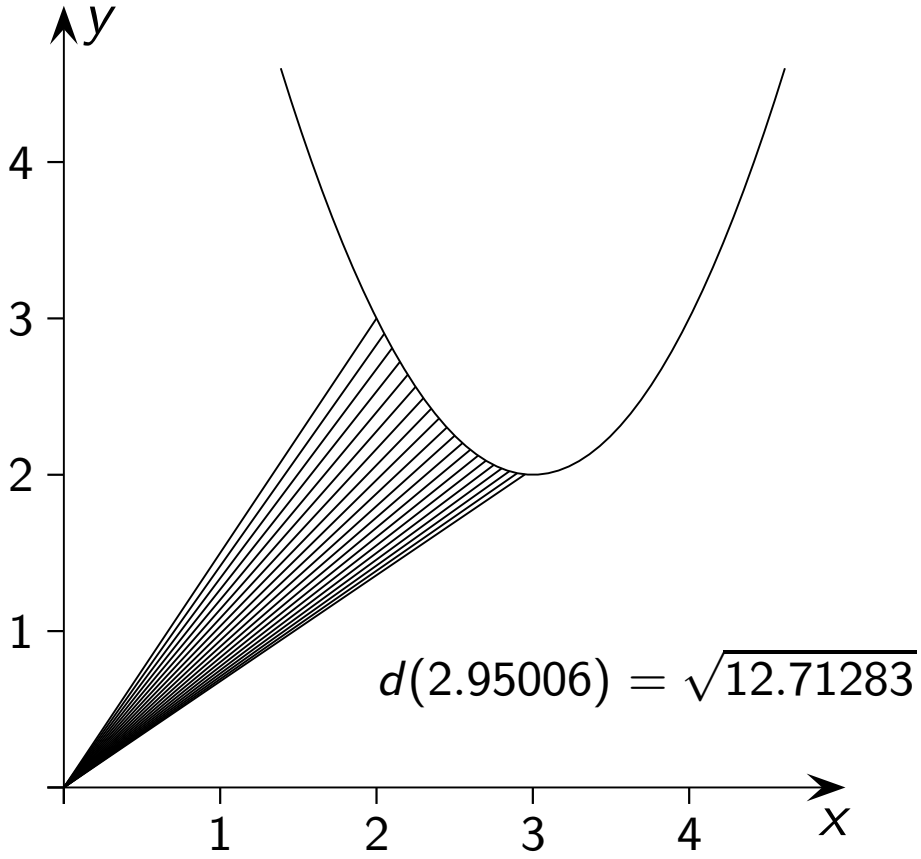
$f(x) = (x-3)^2 + 2$



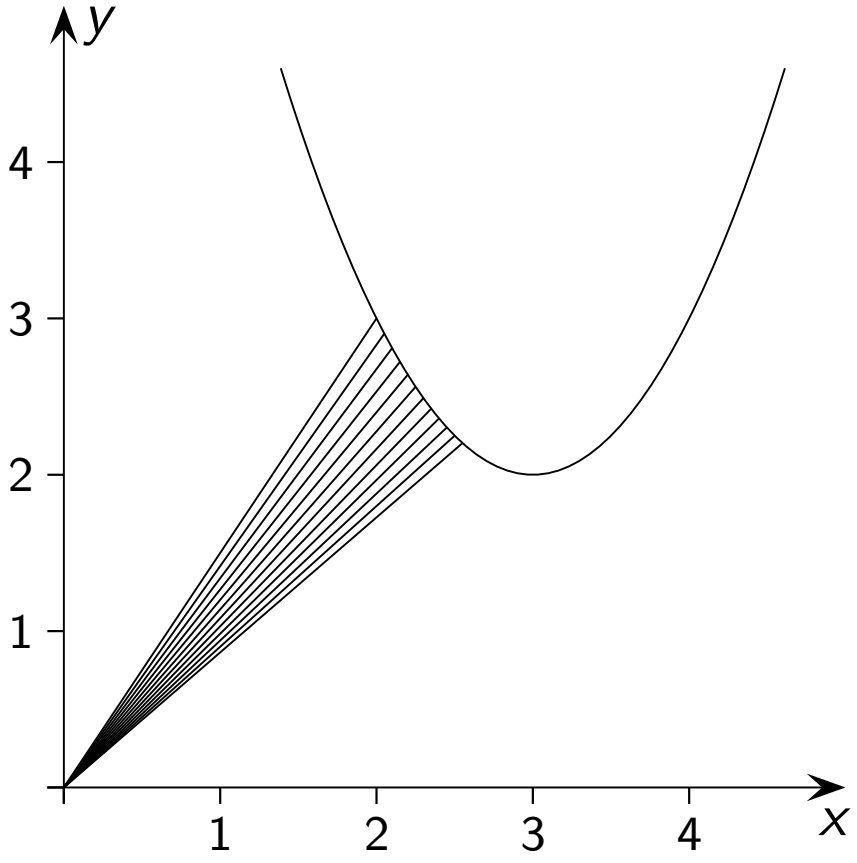
$f(x) = (x-3)^2 + 2$



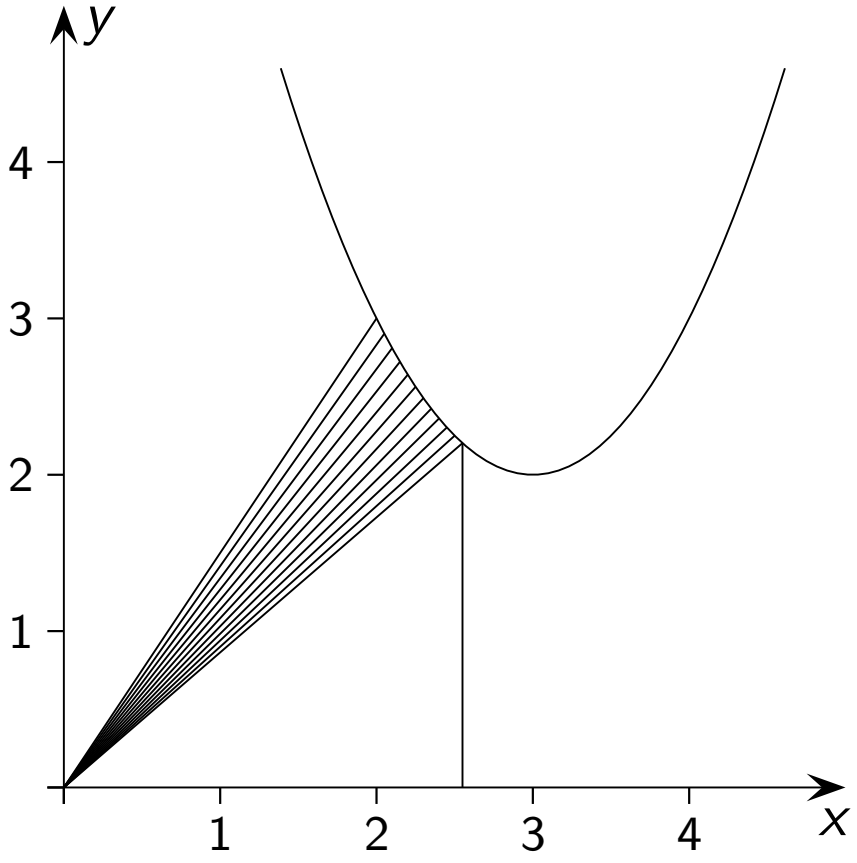
$f(x) = (x-3)^2 + 2$



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

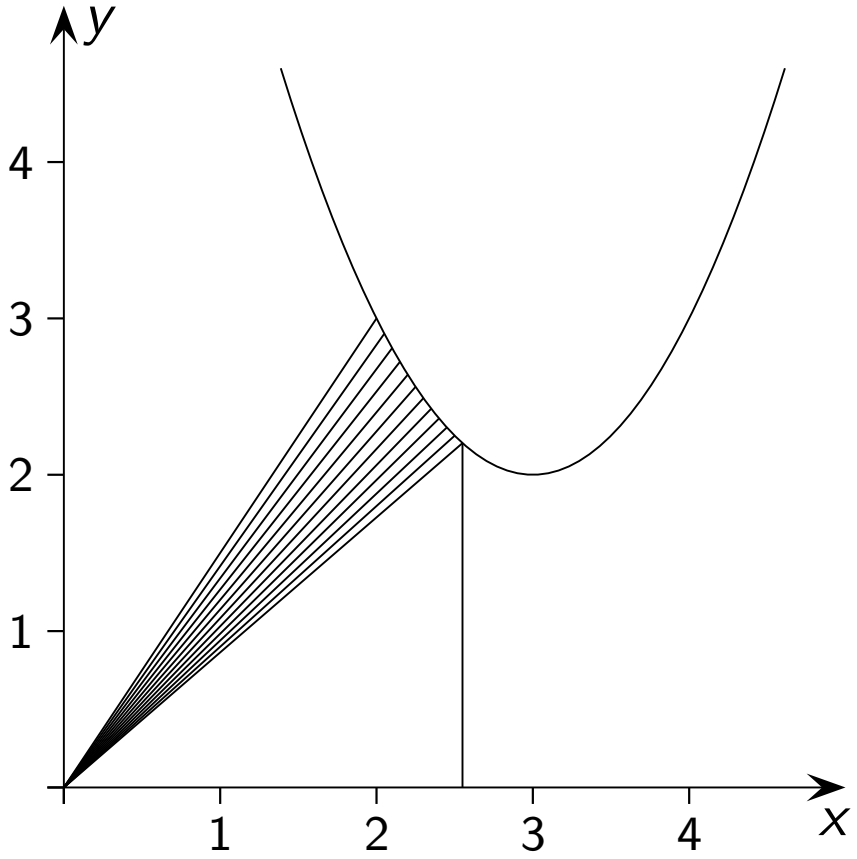


$f(x) = (x-3)^2 + 2$



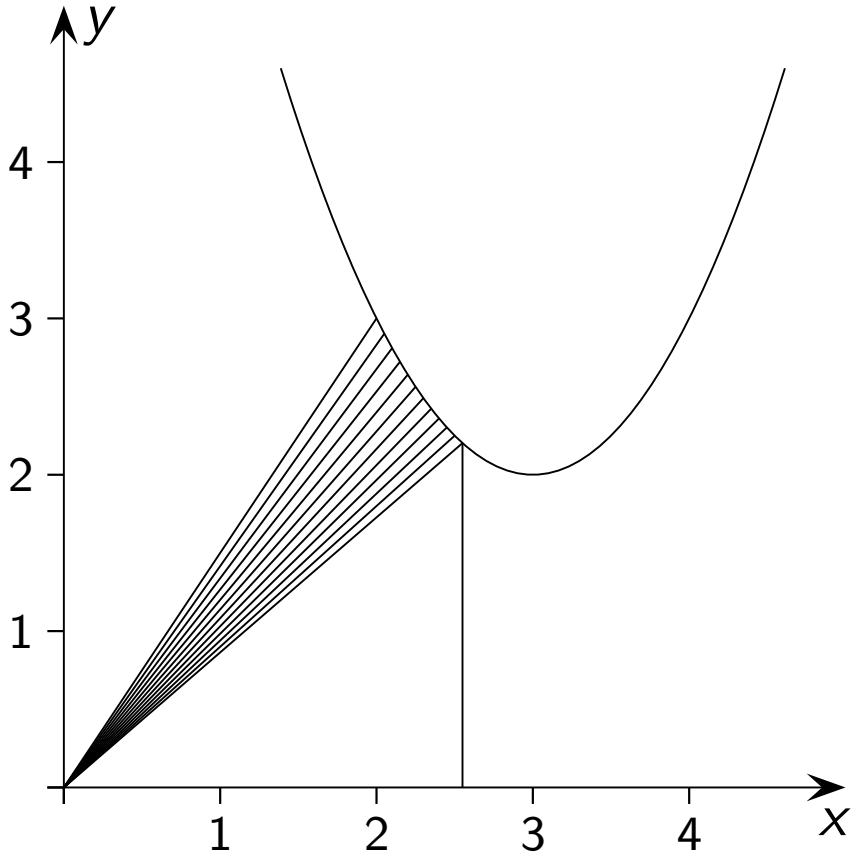
$f(x) = (x-3)^2 + 2$

$$d(x) \;=\; \sqrt{x^2 + (f(x))^2}$$



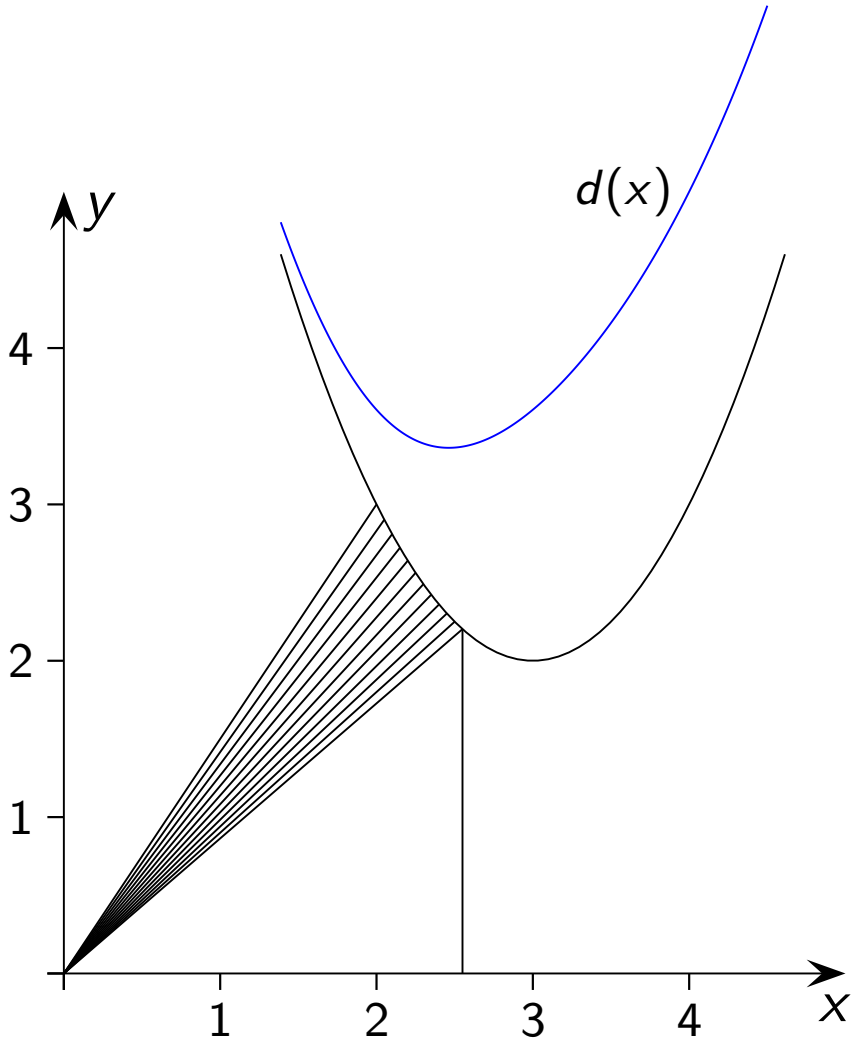
$f(x) = (x-3)^2 + 2$

$$
\begin{aligned}
d(x) &= \sqrt{x^2 + (f(x))^2} \\
x_E &= 2{,}462
\end{aligned}
$$

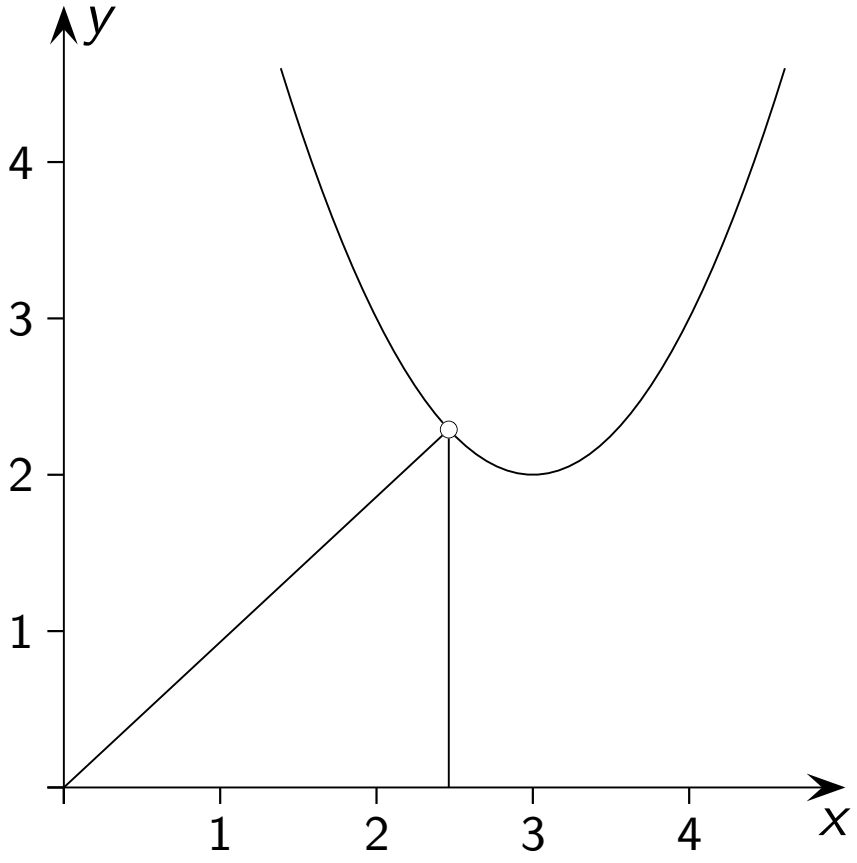


$f(x) = (x-3)^2 + 2$

$$d(x) = \sqrt{x^2 + (f(x))^2}$$
$$x_E = 2{,}462$$

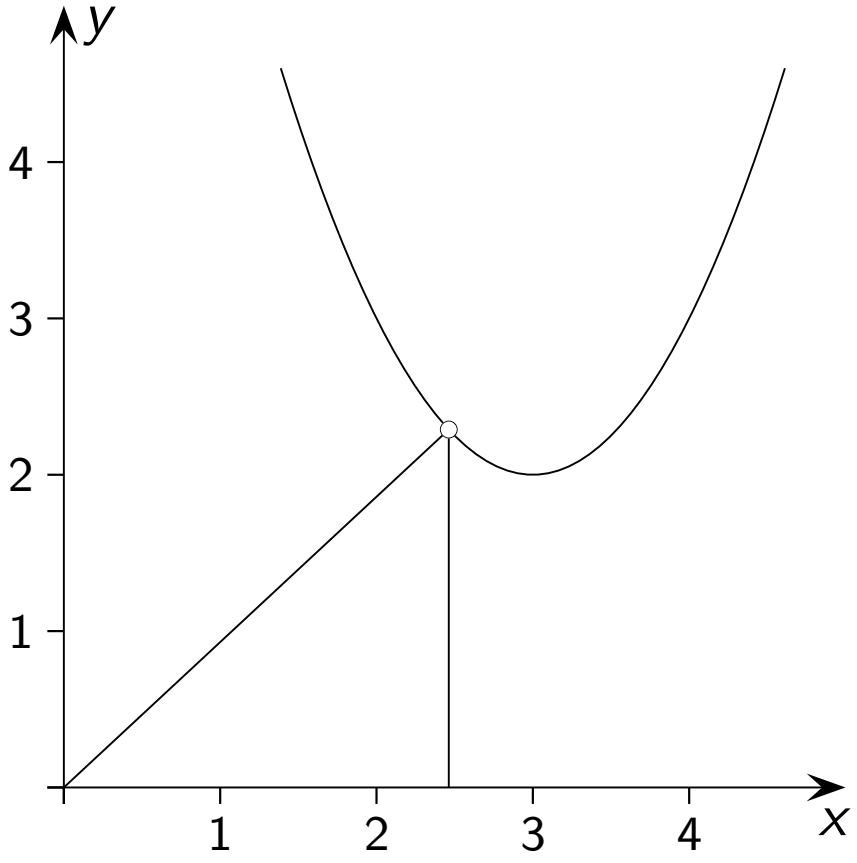


$f(x) = (x-3)^2 + 2$



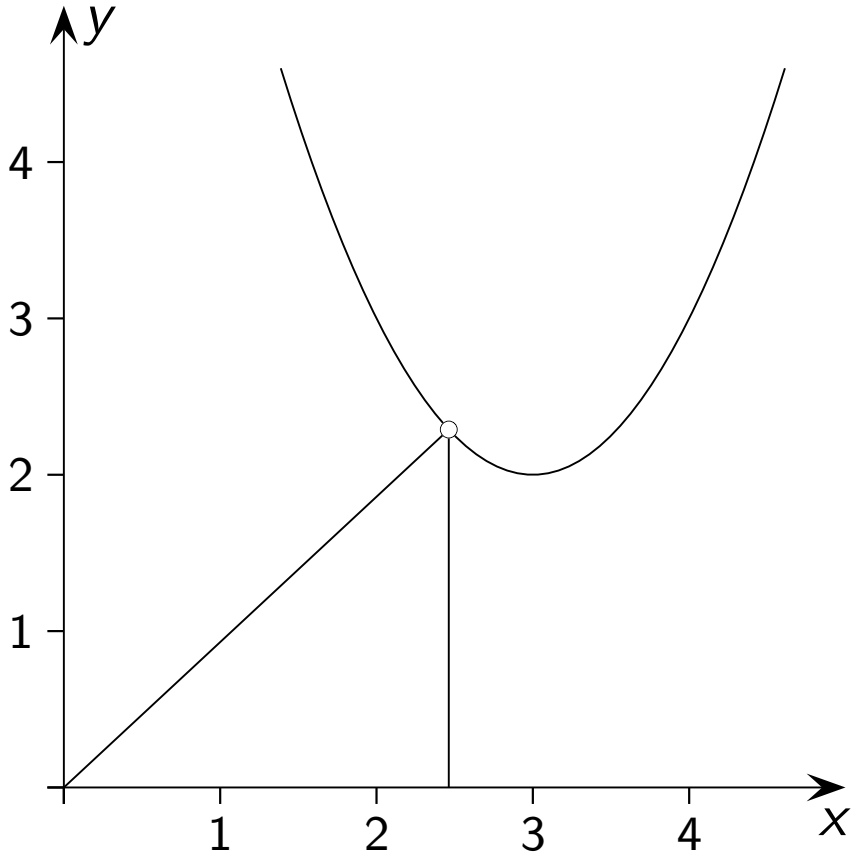
$f(x) = (x-3)^2 + 2$

$$d(x) \;=\; \sqrt{x^2 + (f(x))^2}$$



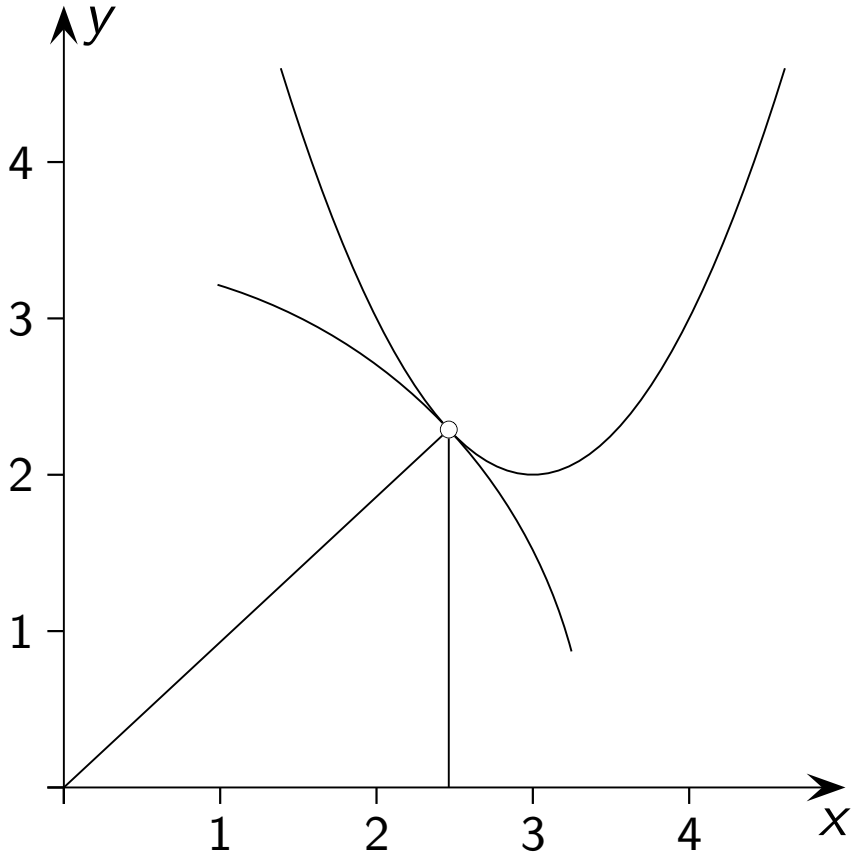
$f(x) = (x-3)^2 + 2$

$$
\begin{aligned}
d(x) &= \sqrt{x^2 + (f(x))^2} \\
d(x_E) &= 3{,}362
\end{aligned}
$$



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

$$
\begin{aligned}
d(x) &= \sqrt{x^2 + (f(x))^2} \\
d(x_E) &= 3{,}362
\end{aligned}
$$



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

$$
\begin{aligned}
d(x) &= \sqrt{x^2 + (f(x))^2} \\
d(x_E) &= 3{,}362
\end{aligned}
$$