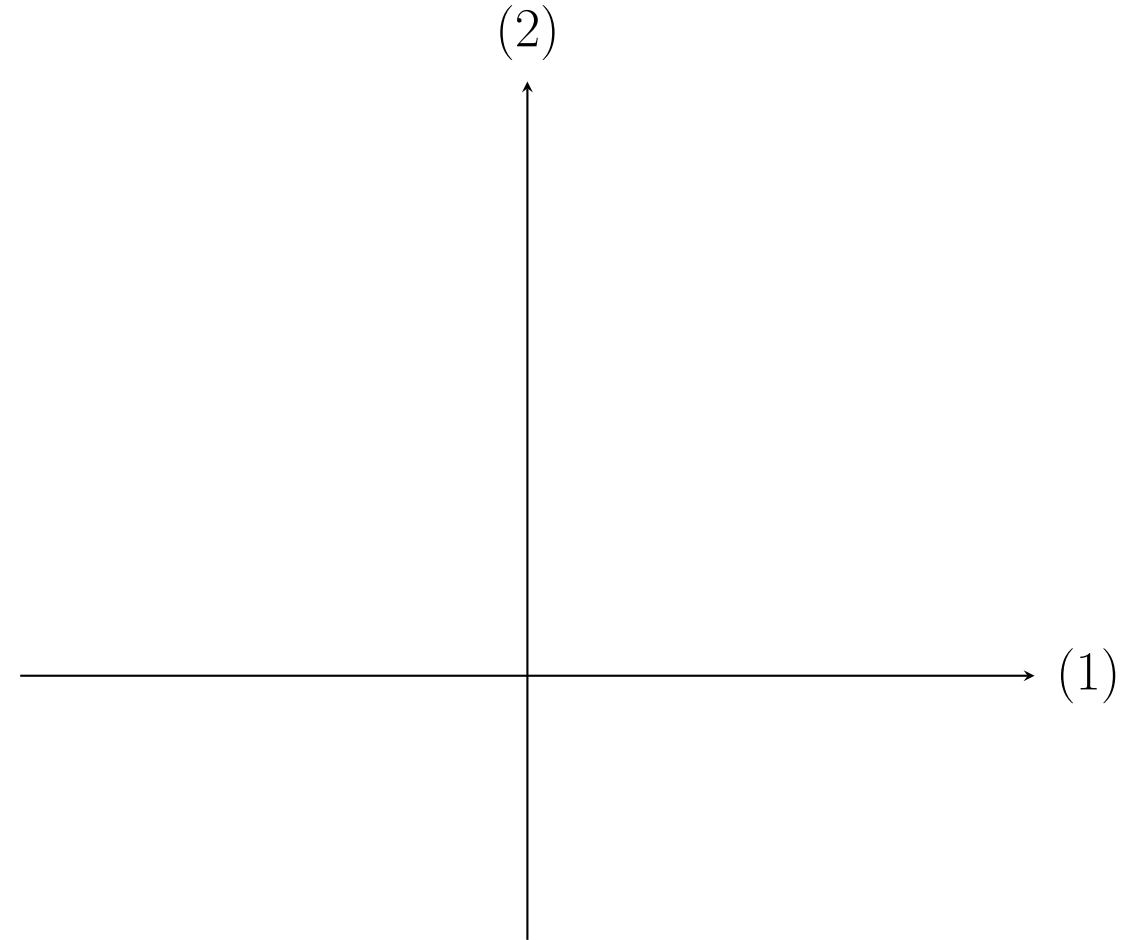


Bestem monotoniforhold

Bestem monotoniforhold for funktionen

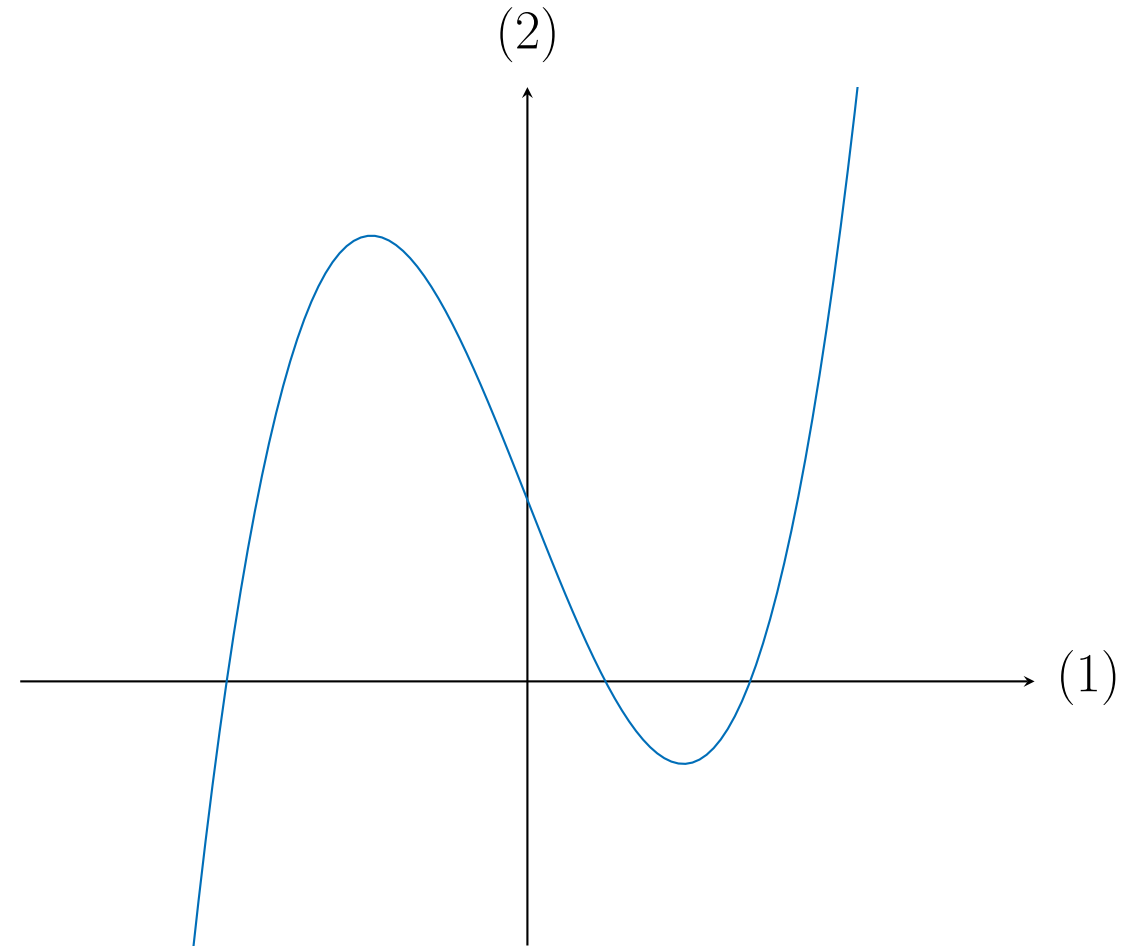
$$f(x) = x^3 - 12x + 11.$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

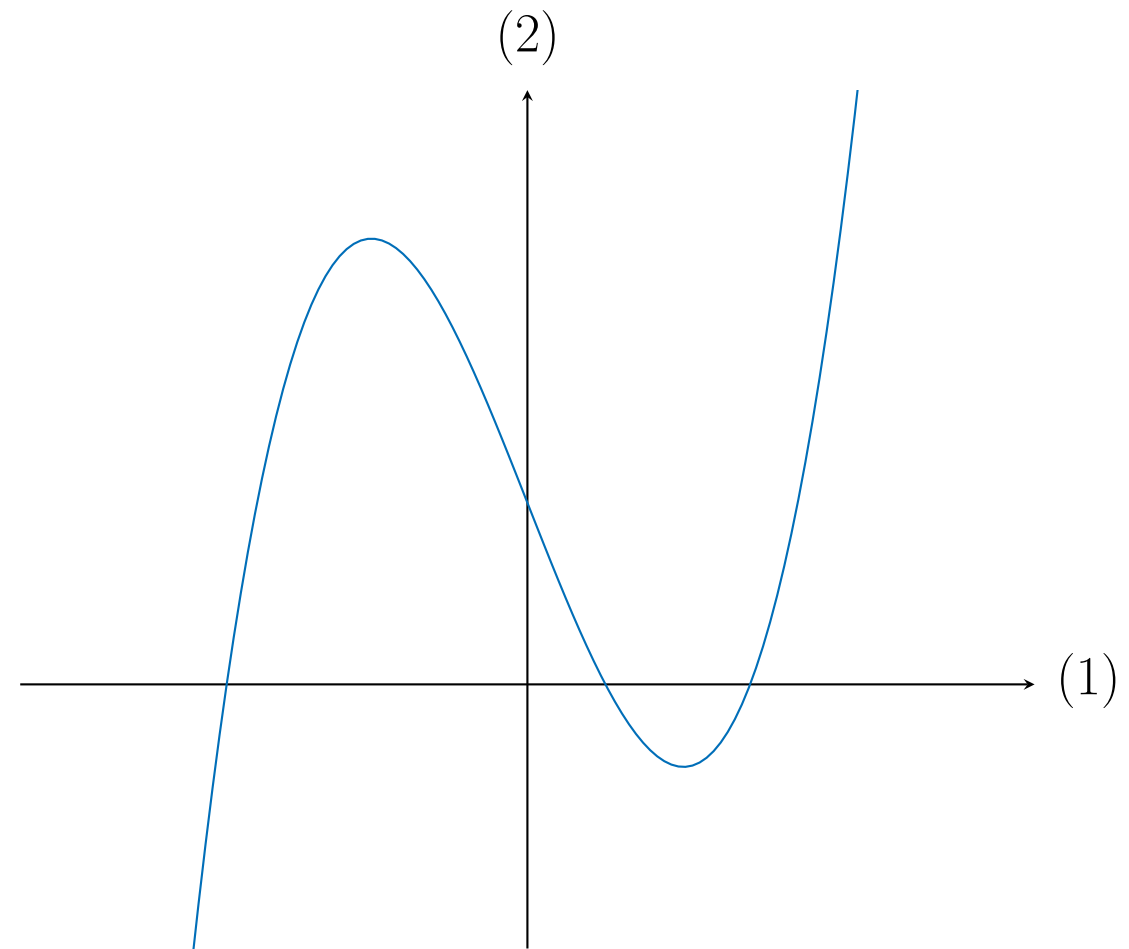


Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.



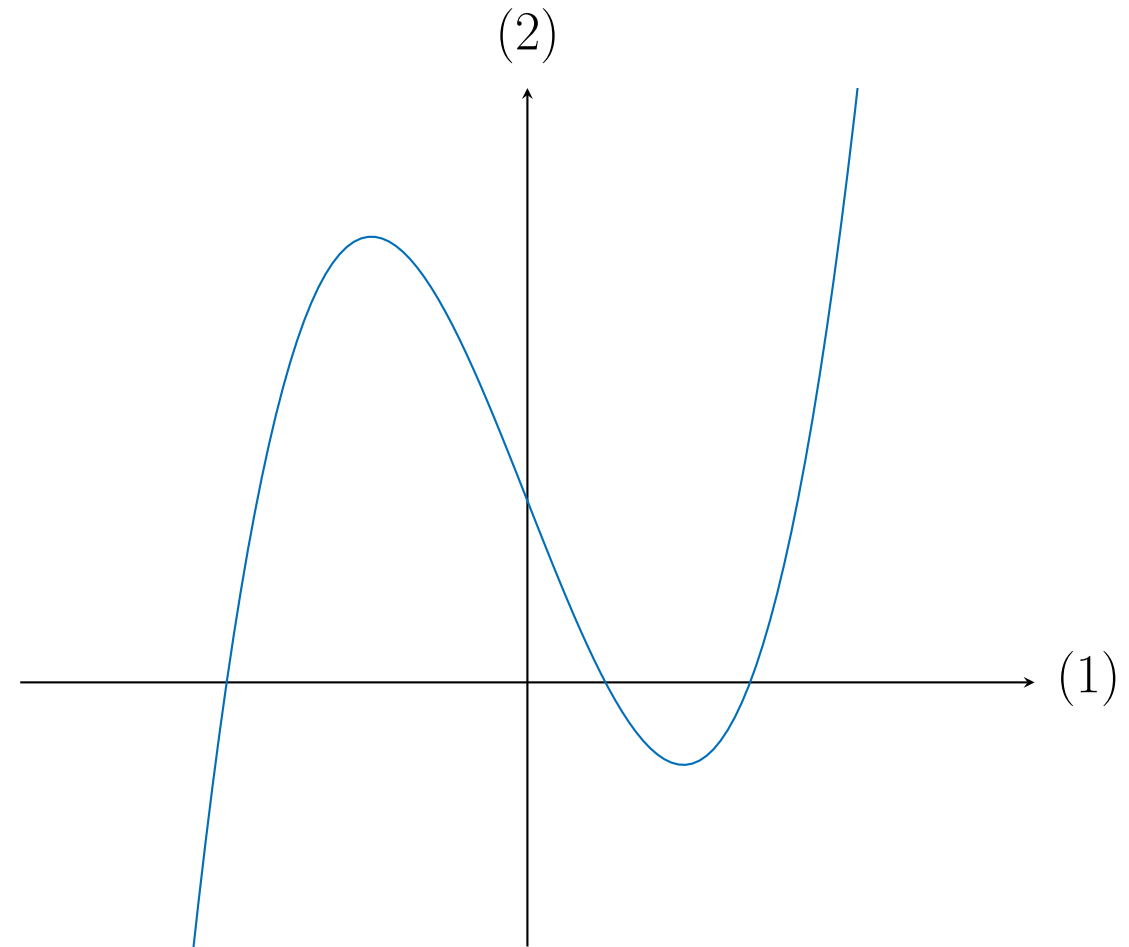
Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$



Bestem monotoniforhold

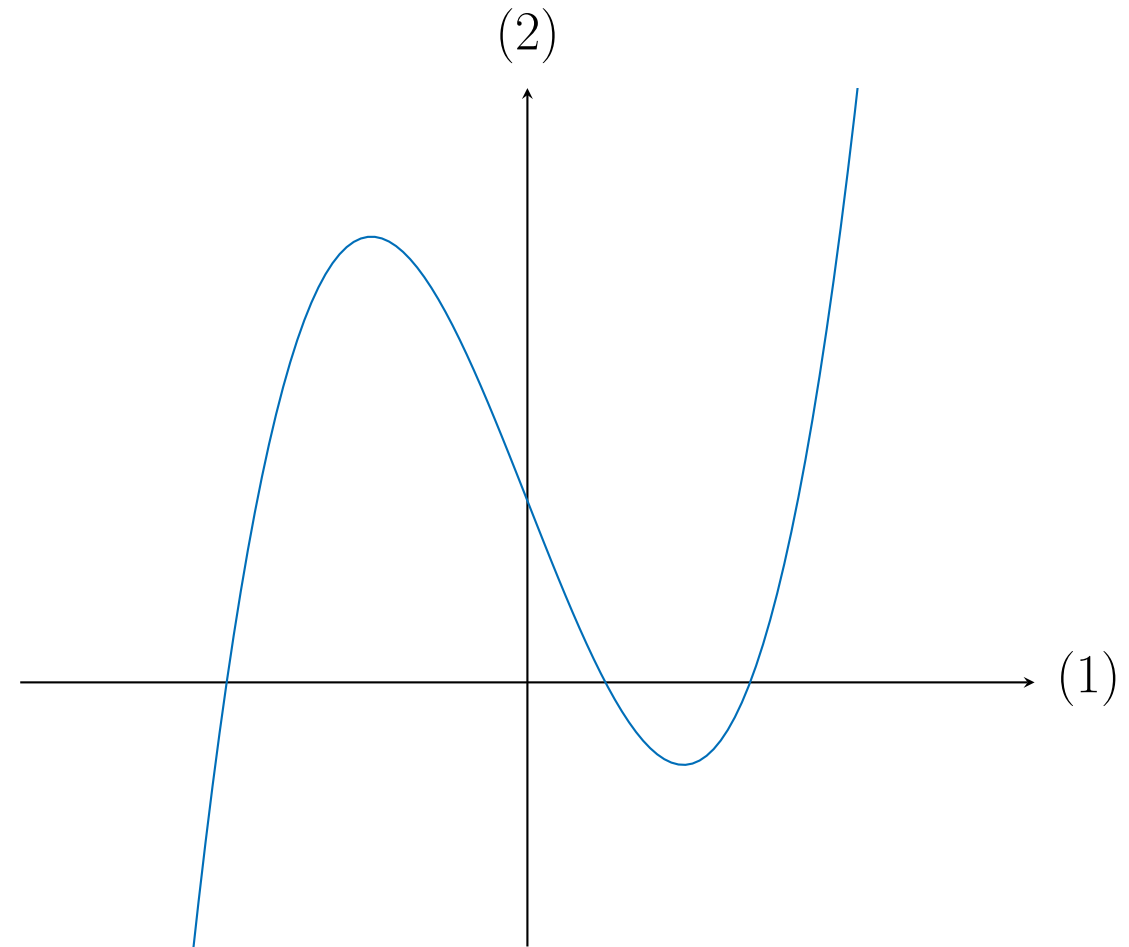
Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

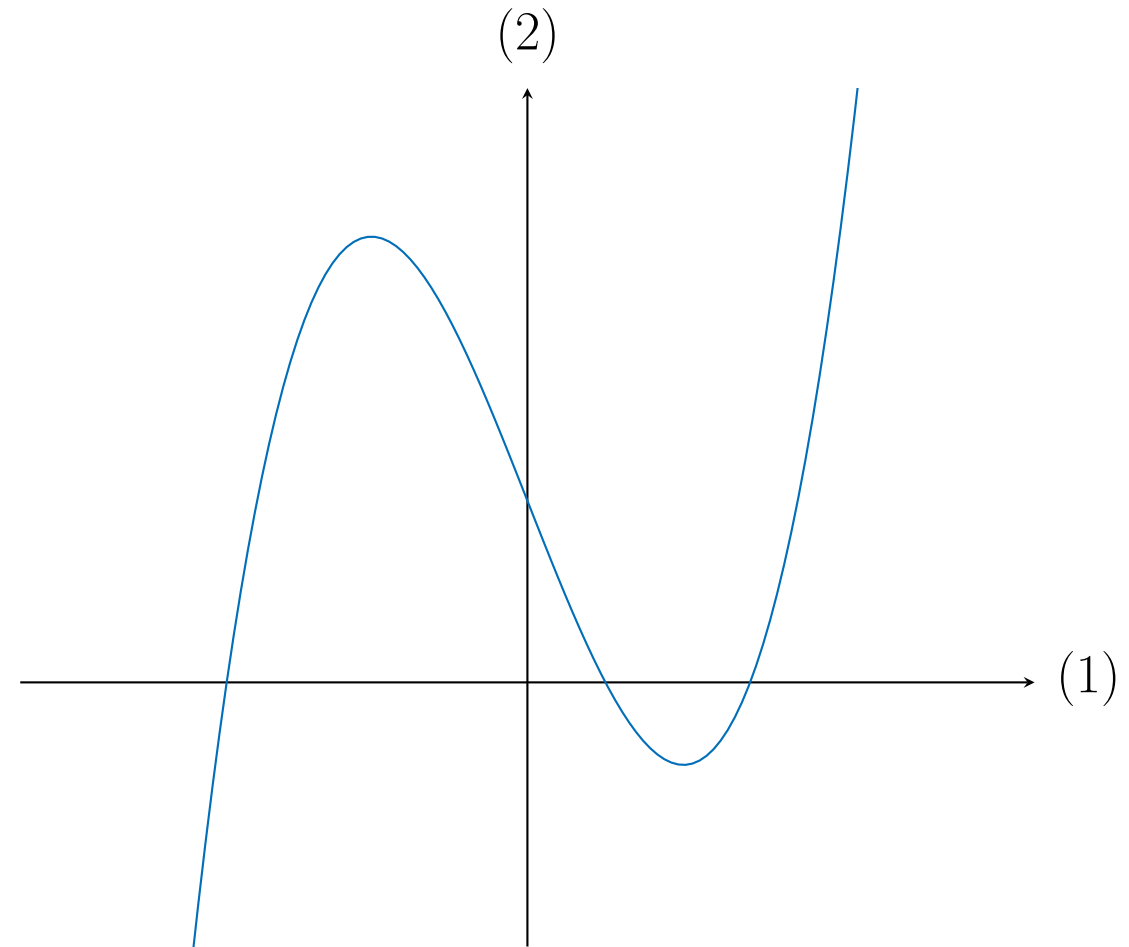
$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$

$$12 = 3x^2$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

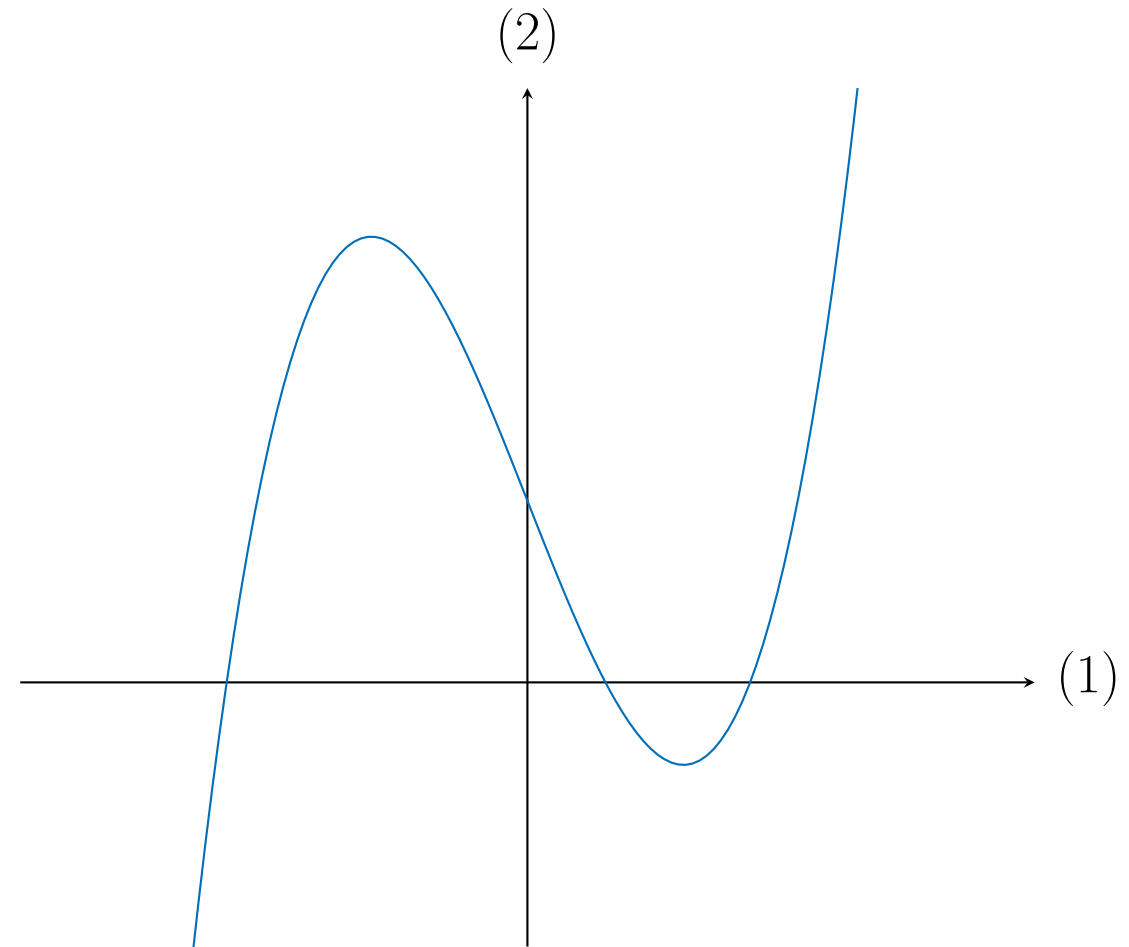
Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$

$$12 = 3x^2$$

$$4 = x^2$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

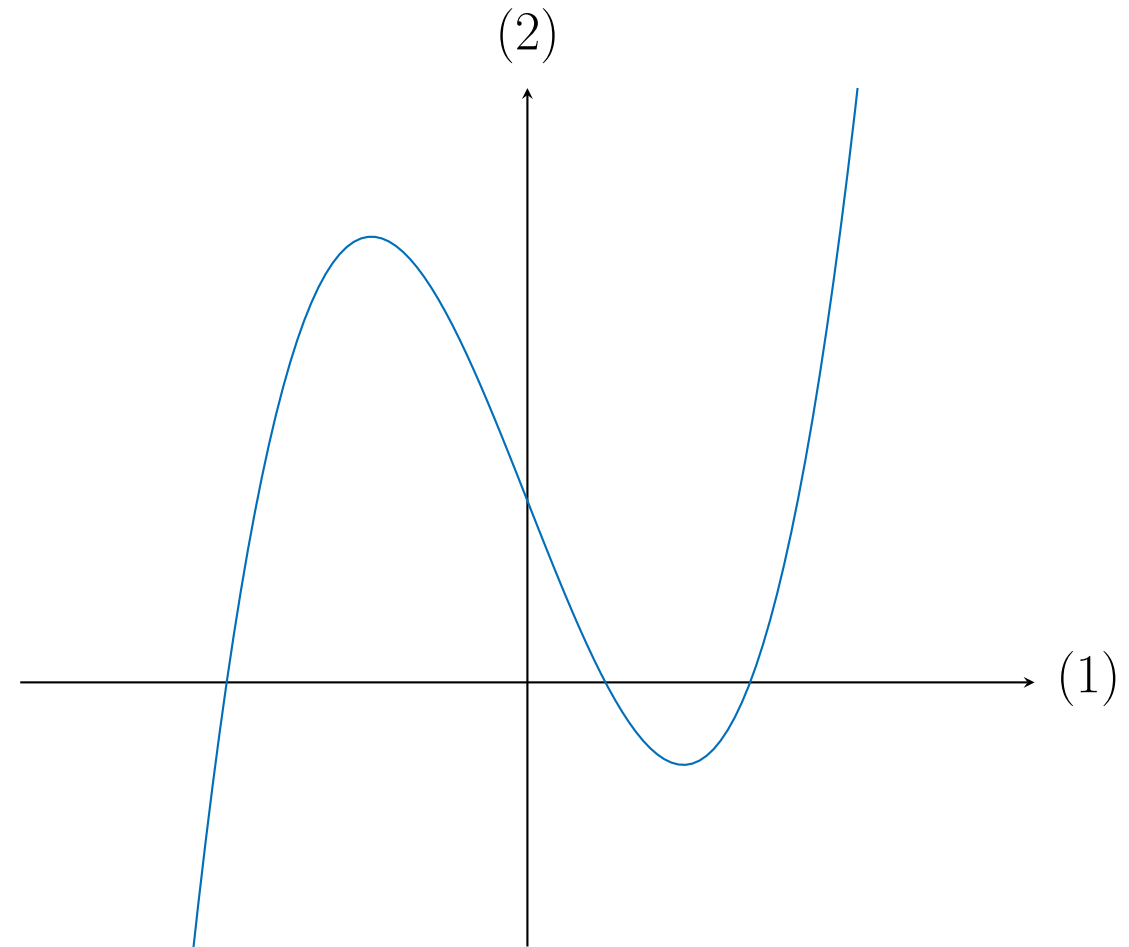
$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$

$$12 = 3x^2$$

$$4 = x^2$$

$$\pm 2 = x$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

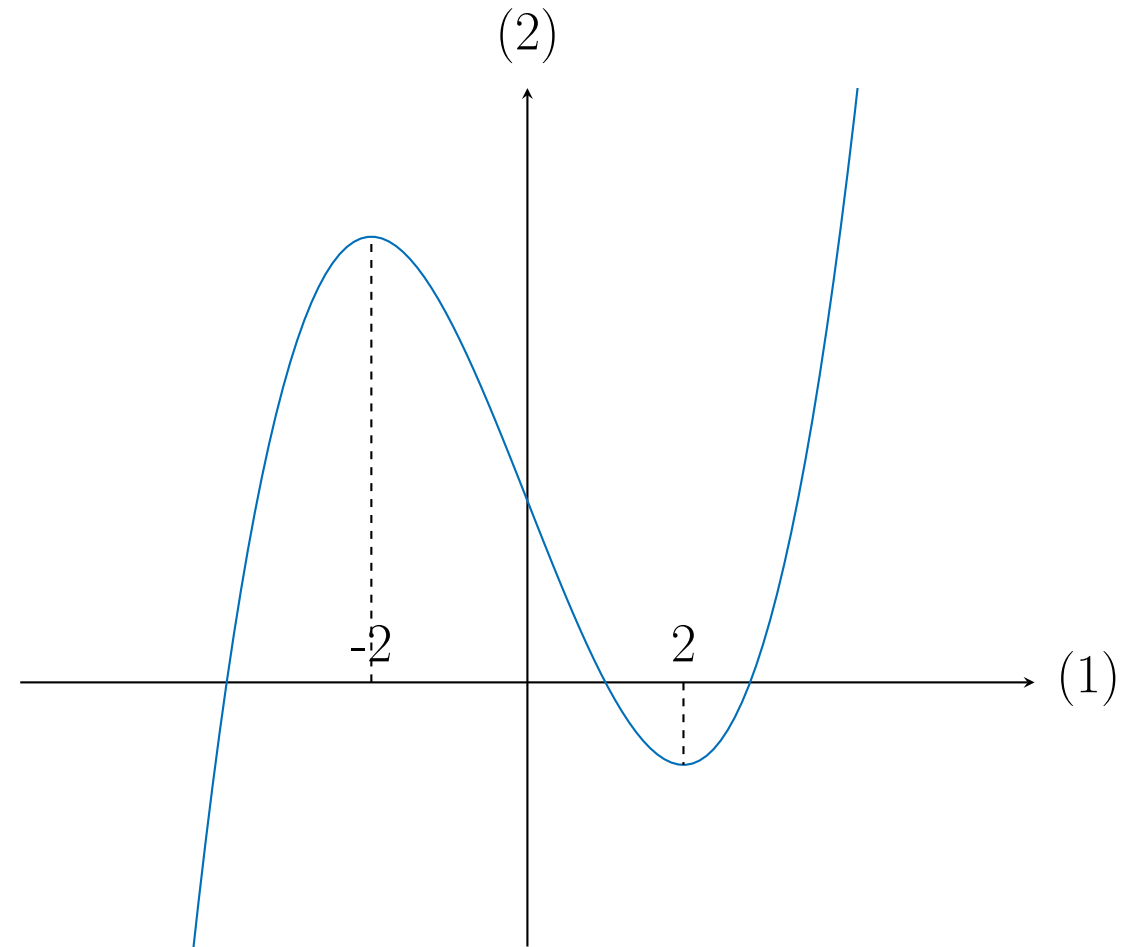
$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$

$$12 = 3x^2$$

$$4 = x^2$$

$$\pm 2 = x$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

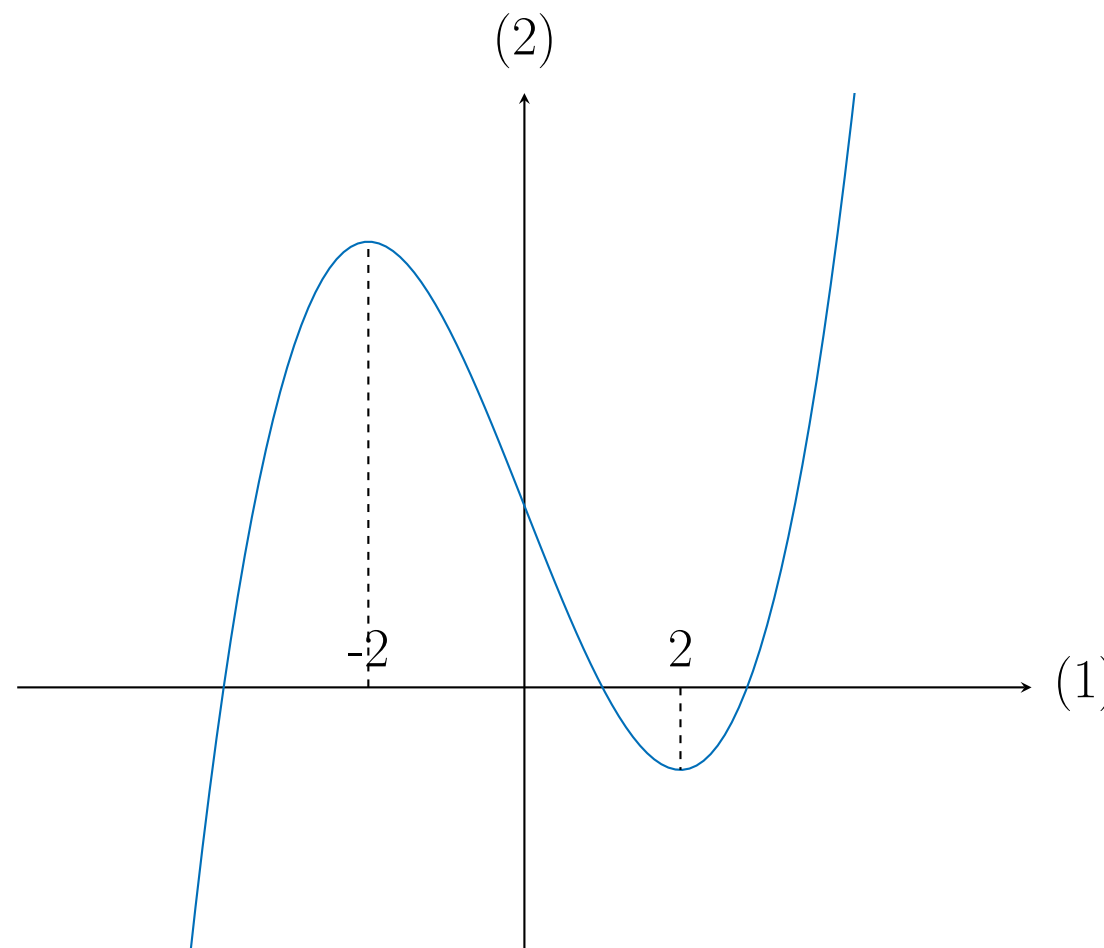
$$0 = 3x^2 - 12$$

$$12 = 3x^2$$

$$4 = x^2$$

$$\pm 2 = x$$

Bestem fortegn for f' .



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

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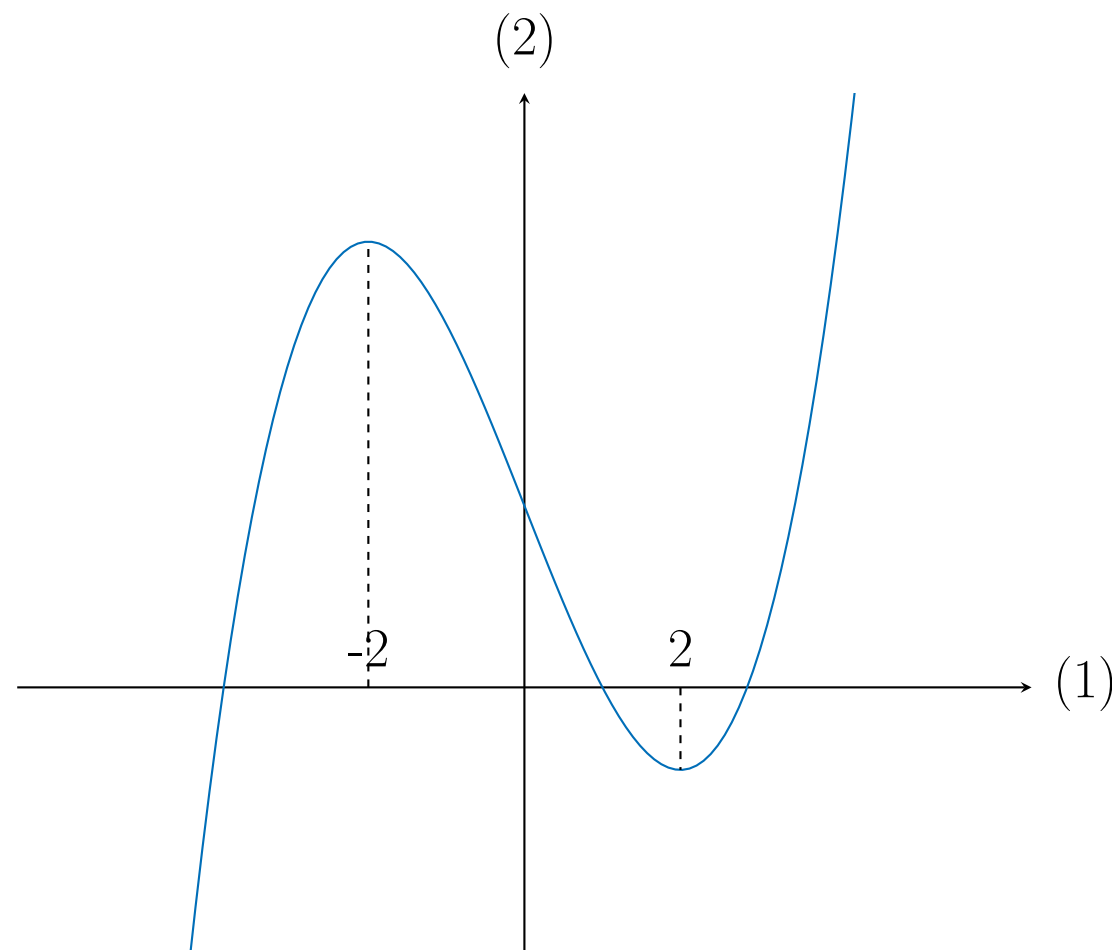
$$12 = 3x^2$$

$$4 = x^2$$

$$\pm 2 = x$$

Bestem fortegn for f' .

$$f'(-3) = 3 \cdot (-3)^2 - 12$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$

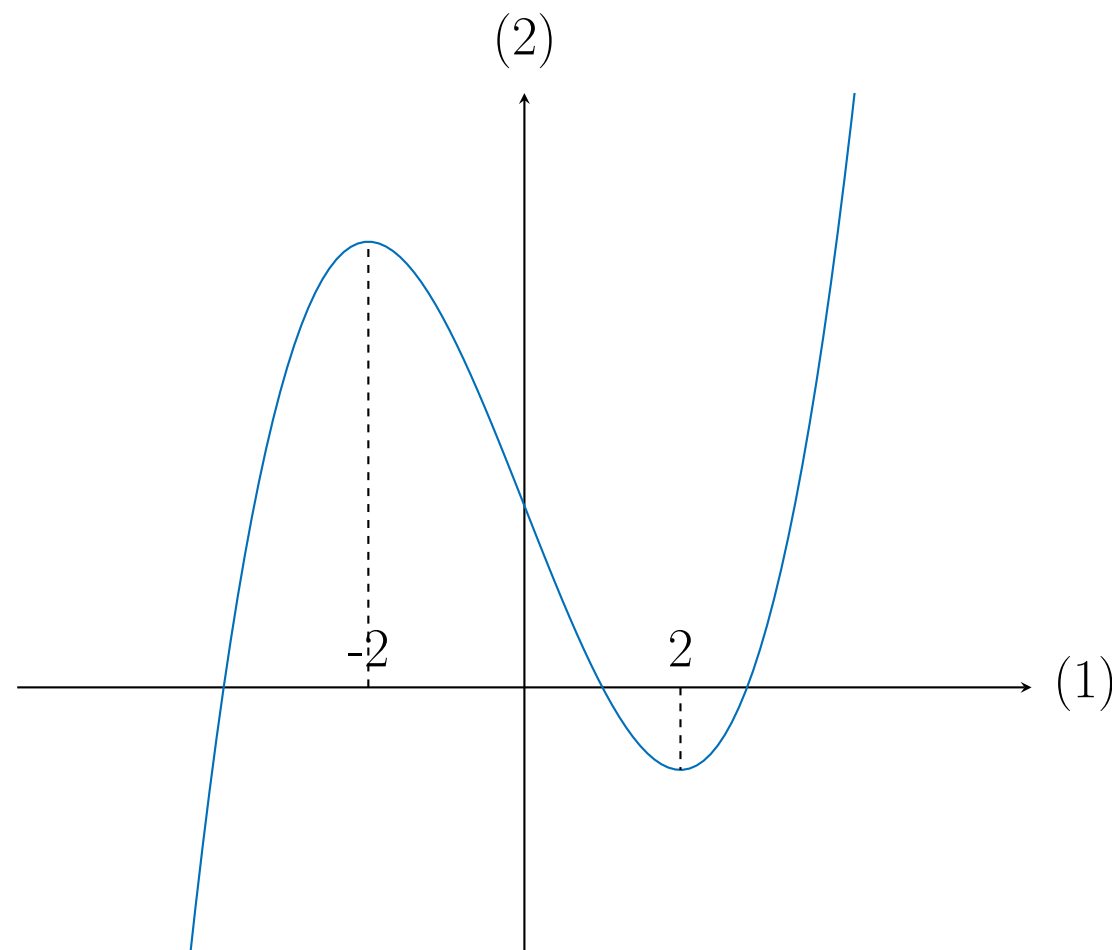
$$12 = 3x^2$$

$$4 = x^2$$

$$\pm 2 = x$$

Bestem fortegn for f' .

$$f'(-3) = 3 \cdot (-3)^2 - 12 = 15$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$

$$12 = 3x^2$$

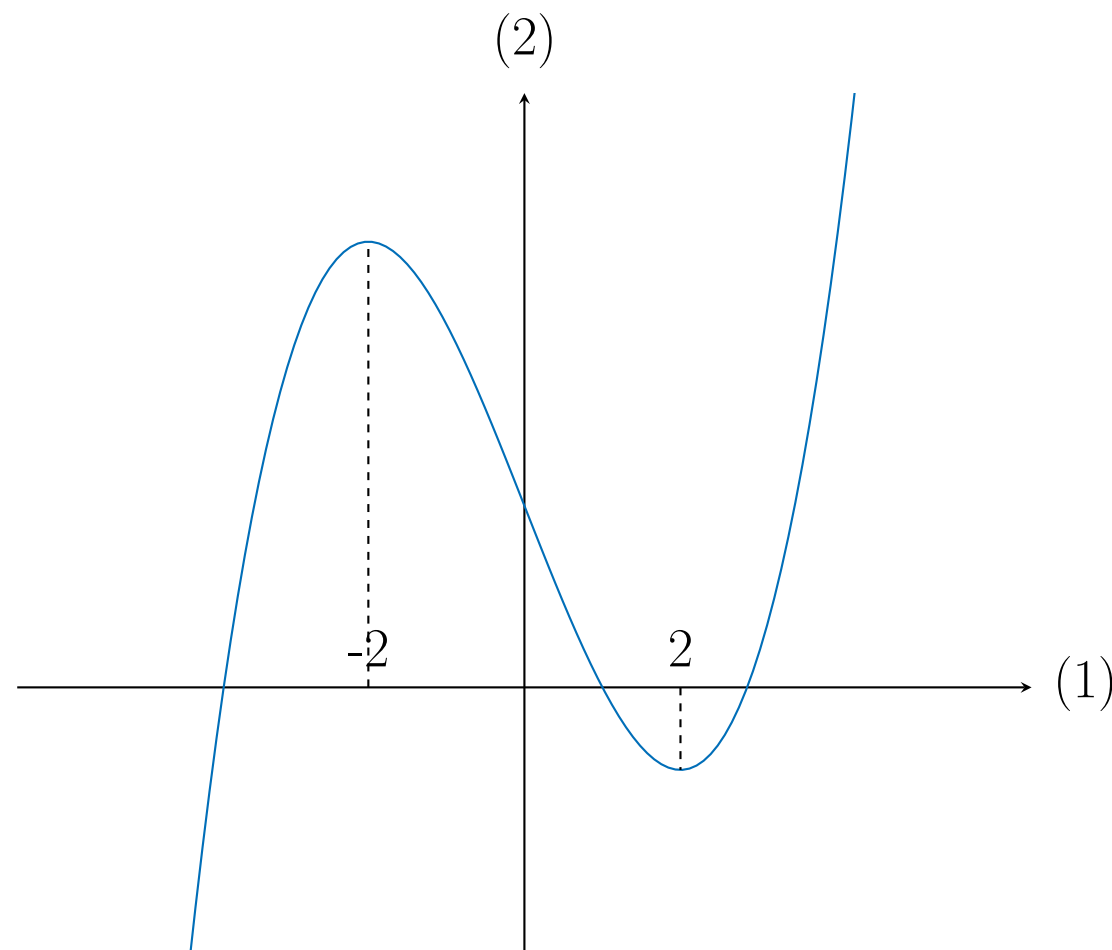
$$4 = x^2$$

$$\pm 2 = x$$

Bestem fortegn for f' .

$$f'(-3) = 3 \cdot (-3)^2 - 12 = 15$$

$$f'(0) = 3 \cdot (0)^2 - 12$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$

$$12 = 3x^2$$

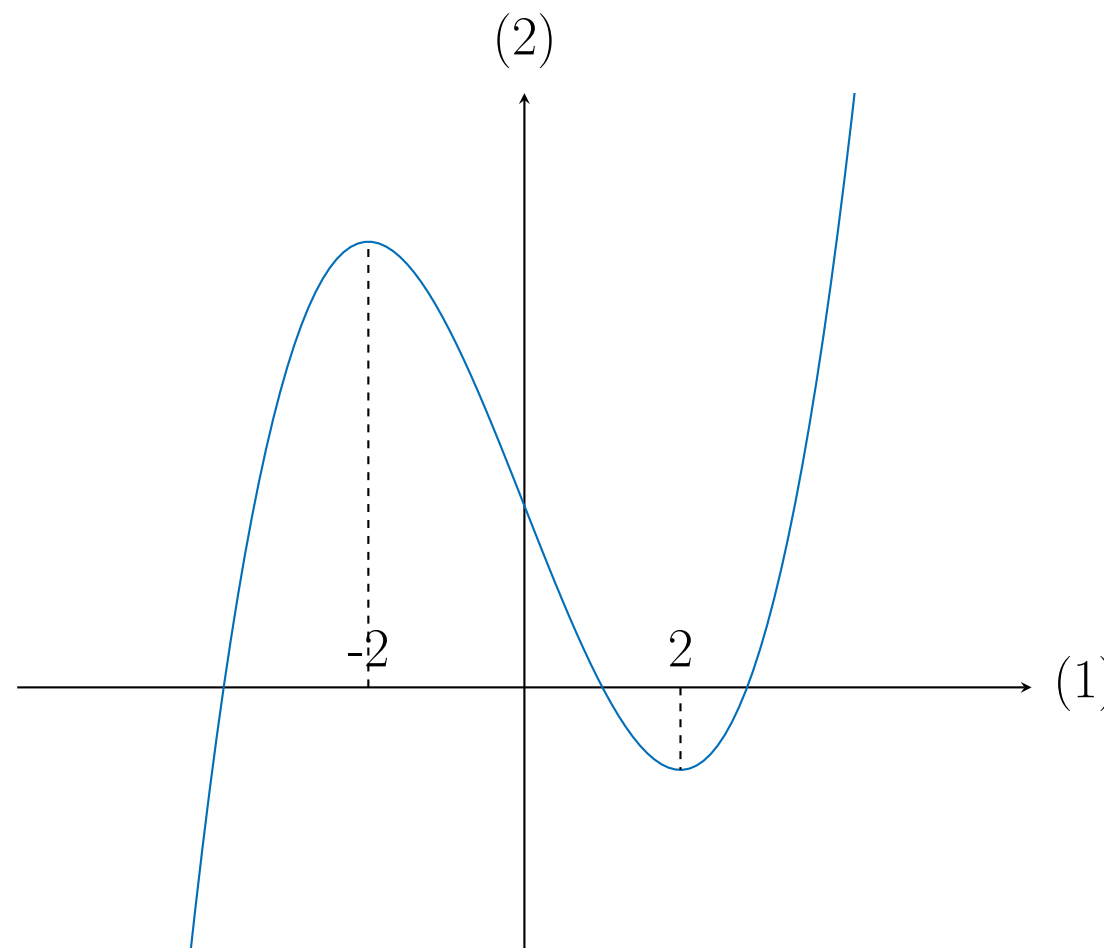
$$4 = x^2$$

$$\pm 2 = x$$

Bestem fortegn for f' .

$$f'(-3) = 3 \cdot (-3)^2 - 12 = 15$$

$$f'(0) = 3 \cdot (0)^2 - 12 = -12$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$

$$12 = 3x^2$$

$$4 = x^2$$

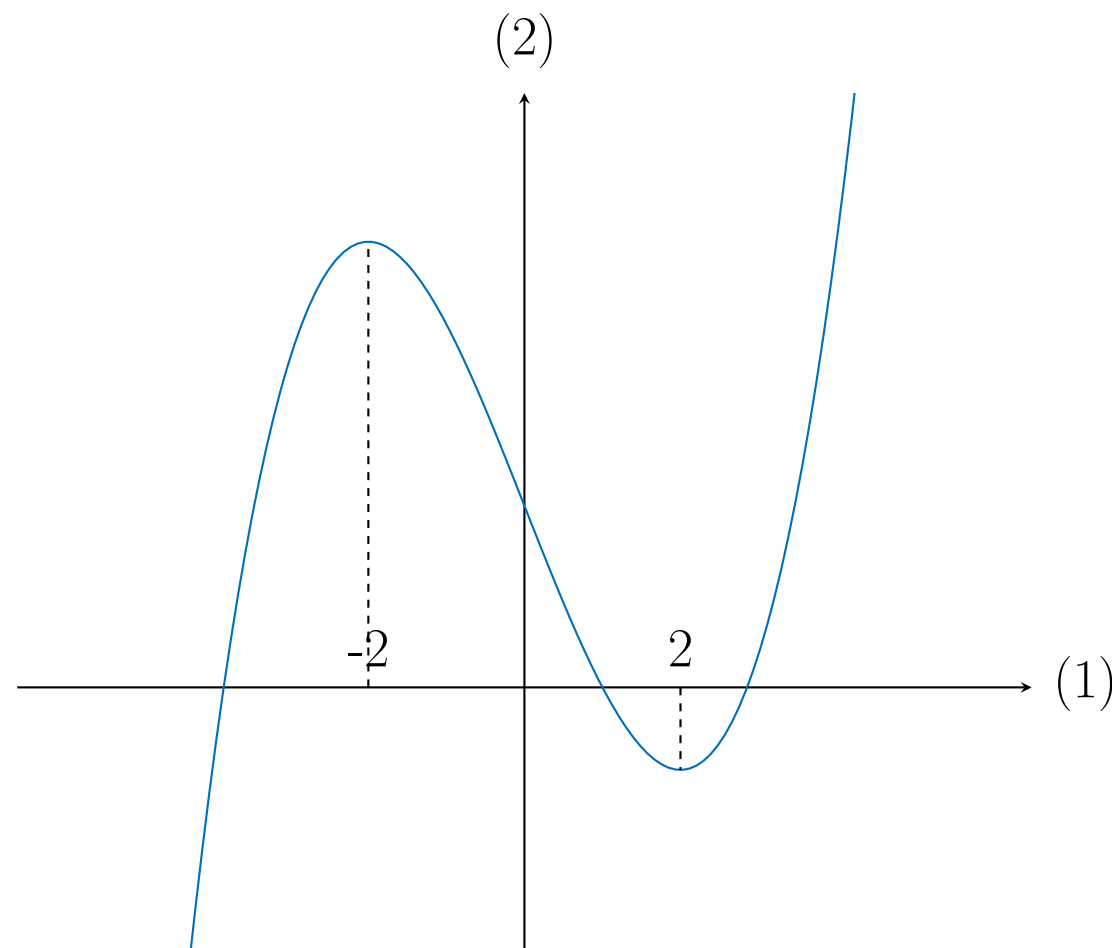
$$\pm 2 = x$$

Bestem fortegn for f' .

$$f'(-3) = 3 \cdot (-3)^2 - 12 = 15$$

$$f'(0) = 3 \cdot (0)^2 - 12 = -12$$

$$f'(3) = 3 \cdot (3)^2 - 12$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

Løs ligningen $f'(x) = 0$.

$$f'(x) = 3x^2 - 12$$

$$0 = 3x^2 - 12$$

$$12 = 3x^2$$

$$4 = x^2$$

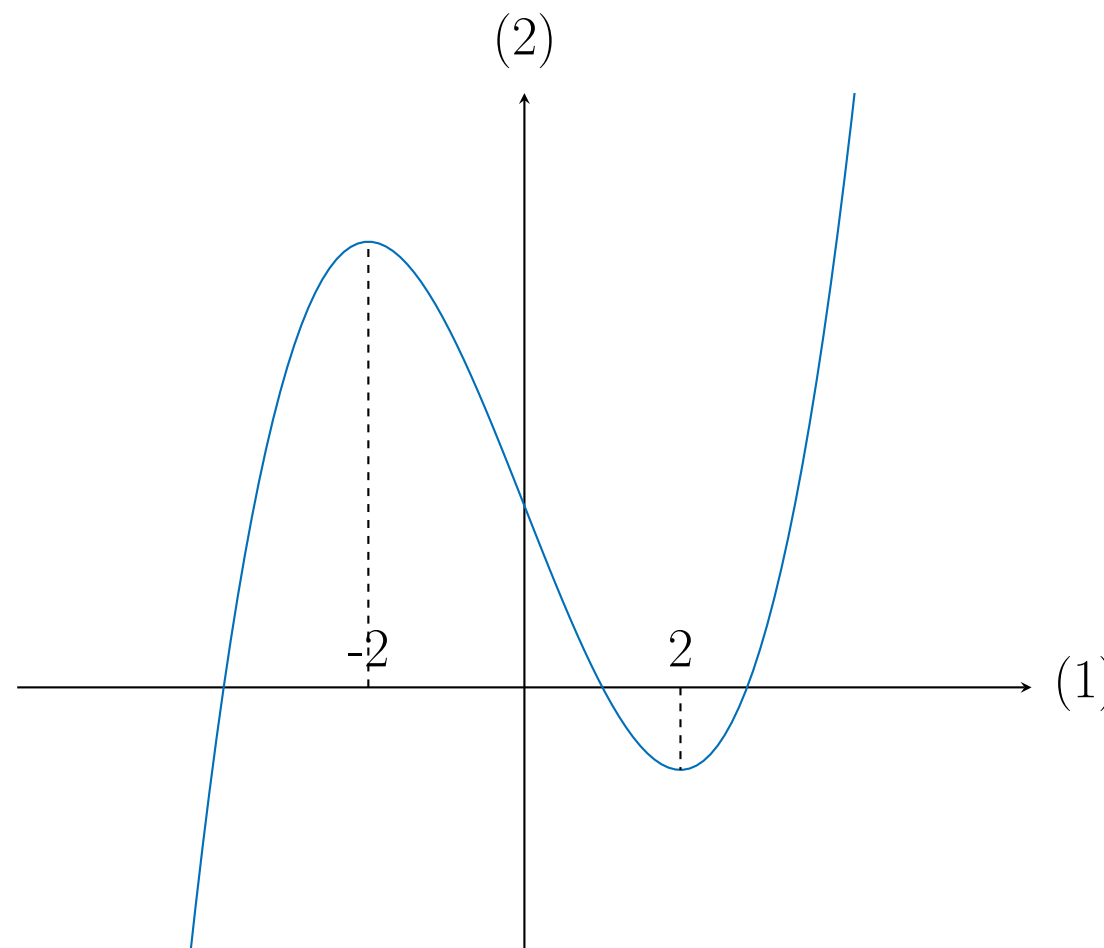
$$\pm 2 = x$$

Bestem fortegn for f' .

$$f'(-3) = 3 \cdot (-3)^2 - 12 = 15$$

$$f'(0) = 3 \cdot (0)^2 - 12 = -12$$

$$f'(3) = 3 \cdot (3)^2 - 12 = 15$$



Bestem monotoniforhold

Bestem monotoniforhold for funktionen

$$f(x) = x^3 - 12x + 11.$$

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$$\pm 2 = x$$

Bestem fortegn for f' .

$$f'(-3) = 3 \cdot (-3)^2 - 12 = 15$$

$$f'(0) = 3 \cdot (0)^2 - 12 = -12$$

$$f'(3) = 3 \cdot (3)^2 - 12 = 15$$

f er voksende i intervallerne $]-\infty, -2]$ og $[2, \infty[$
og aftagende i intervallet $[-2, 2]$

