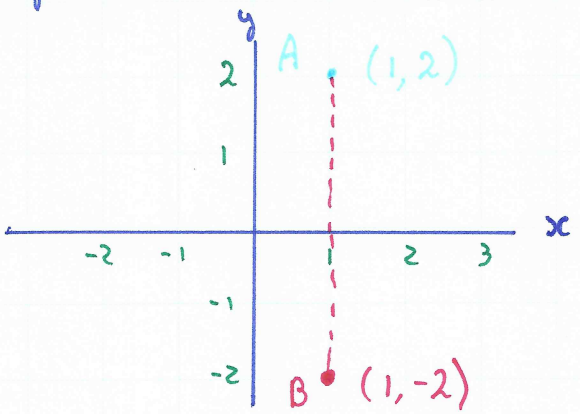
Wiskunde-centrum
Inge van der Heijden

Reflections

Reflection in the x-axis:



Point A (1, 2)

↓ reflection in the x-axis

B (1, -2)

(x coordinate stays the same, y coordinate changes sign)

esc: $y = 2x^2 + 3$

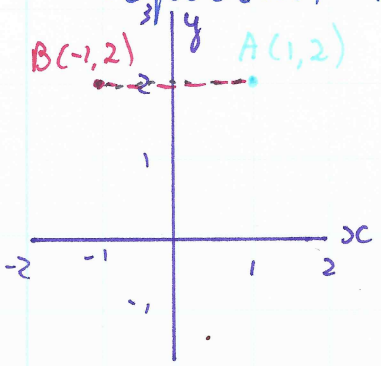
↓ reflection in the x-axis

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

$y = -2x^2 - 3$

(action: multiply the whole formula by -1)

Reflection in the y-axis:



Point A (1, 2)

↓ reflection in the y-axis

B (-1, 2)

(x changes sign, y stays the same)

esc: $y = 2x^2 + 3$

↓ reflection in the y-axis

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

$y = -2x^3 + 3$

(action: substitute (-x) for every x in the formula)

$(-x)^3 = -x \cdot -x \cdot -x = -x^3$