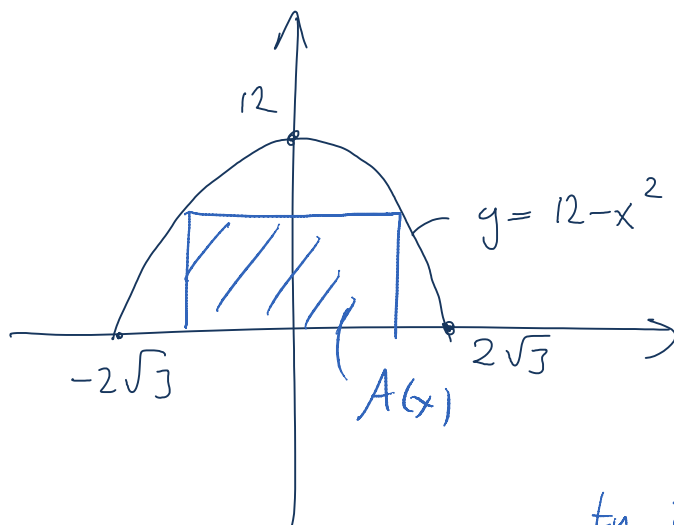


Figur



$$12 - x^2 = 0$$

$$x = \pm \sqrt{12} = \pm 2\sqrt{3}$$

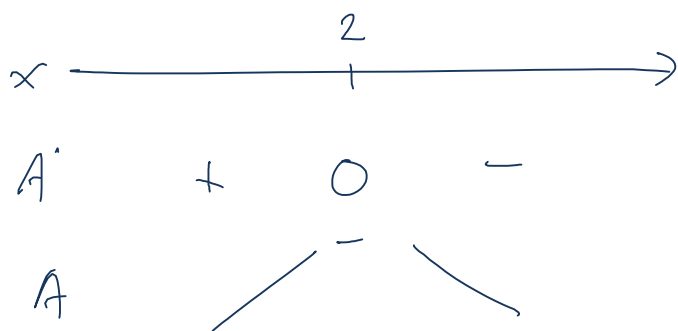
ty zure hornen på $y = 12 - x^2$

$$A(x) = \overset{b}{2x} \cdot \overset{h}{y} = 2x \cdot (12 - x^2) = 24x - 2x^3$$

Definitionsmängd $0 \leq x \leq 2\sqrt{3}$

$$A'(x) = 24 - 6x^2 = 0 \Leftrightarrow x^2 = 4 \Leftrightarrow x = \pm 2$$

Teckenstudie



Alltså är arean maximal då $x = 2$.

Största värdet blir $A(2) = 24 \cdot 2 - 2 \cdot 2^3 = 48 - 16 = \underline{\underline{32}}$