

3235

$$V = \underline{b h}$$

Cylinders volym ( $V_c$ )

$$\begin{aligned} V_c &= b \cdot h \\ &= \pi r^2 \cdot h \\ &= \pi x^2 \cdot (24 - 2x) \\ &= 2\pi x^2 (12 - x) \\ &= 2\pi (12x^2 - x^3) \end{aligned}$$

$$V' = 2\pi (24x - 3x^2)$$

Ta' ut  $3x$

$$V' = 6\pi x (8 - x)$$

$$V' = 0 \quad \text{ger}$$

$$0 = 6\pi x \quad \text{eller} \quad x = 8$$

$$V' = 0 \quad \text{ger} \quad x = 8 \quad \text{i intervall } 0 < x < 8$$

$$V \quad \quad \quad 512\pi$$

$$V' \quad \quad \quad + \quad 0 \quad -$$

$$x \quad (0) \quad \quad \quad 8 \quad \quad \quad (12)$$

$$V_{\max} = \pi \cdot 8^2 \cdot 8 = 512\pi \text{ cm}^3$$