

Eindexamen wiskunde B1-2 havo 2002-II

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Een verzameling functies

$$15. \quad \sqrt{27x - x^4} = 0 \Rightarrow x = 0 \vee x = \sqrt[3]{27} = 3$$

$$\frac{1}{2} \cdot 3 \cdot h = 6 \rightarrow h = 4 = \sqrt{27x - x^4}$$

$$\rightarrow x_T = 0,60 \text{ en } x_U = 2,77$$

$$U(2,77; 4) \quad T(0,60; 4)$$

$$16. \quad \sqrt{27p - p^4} - \sqrt{8p - p^4} = 3 \rightarrow p = 1,34$$

Met de GR:

$$y_1 = \sqrt{27x - x^4} - \sqrt{8x - x^4} \quad y_2 = 3$$

$$\text{Intersect} \rightarrow x = 1,34 \rightarrow p = 1,34$$

$$17. \quad \sqrt{10c - 10^4} = 0 \rightarrow c = 10^3$$

$$h'_{10^3}(x) = \frac{-4x^3 + 10^3}{2\sqrt{10^3 \cdot x - x^4}} = 0 \Rightarrow x = \sqrt[3]{250}$$

$$\max h_{10^3}(\sqrt[3]{250}) = 68,74 \Rightarrow B_{h_{10^3}} = [0; 68,74]$$

$$18. \quad \frac{-4 \cdot (1,5)^3 + c}{2 \cdot \sqrt{1,5 \cdot c - (1,5)^4}} = 0 \Rightarrow c = 4 \cdot (1,5)^3 = 13,5$$