

Aufgabe 3)

a) $V_2 = 2000 \text{ L}$

Benutzt = $2000 \text{ L} \cdot \frac{3}{4} = 1500 \text{ L}$

$A = \frac{1}{2} \cdot r^2 (\theta - \sin(\theta))$ $A_{\text{Kreis}} = \pi \cdot r^2$

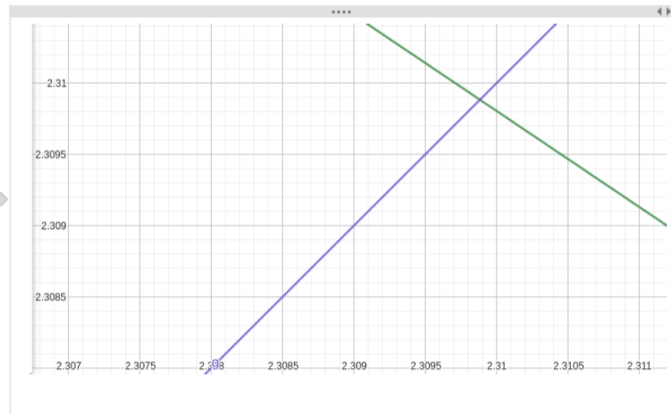
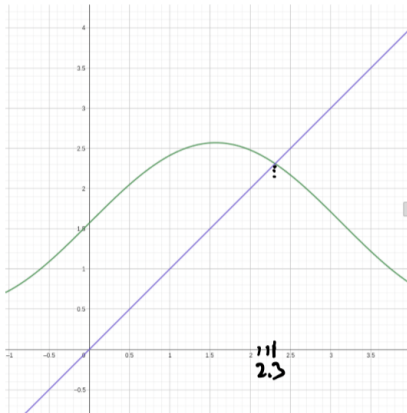
$\frac{1}{2} \cdot r^2 \cdot (\theta - \sin(\theta)) = \pi \cdot r^2 \cdot \frac{1}{4} \rightarrow \frac{3}{4} \text{ Befüllt.}$

$(\theta - \sin(\theta)) = \pi \cdot \frac{1}{2} \quad (\cdot -1)$

$\sin(\theta) - \theta = \frac{-\pi}{2}$

b) $\theta_{n+1} = \sin(\theta_n) + \frac{\pi}{2}$

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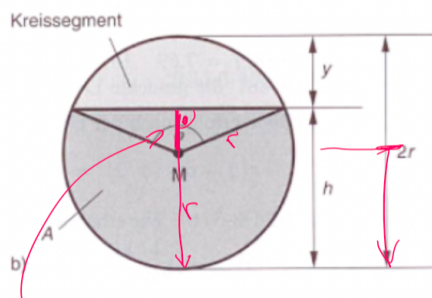


$x_0 = 2.309$ $\sin(x_0) + \frac{\pi}{2}$

x	Result
2.309	2.310
2.310	2.3098 <u>≈ 2.310</u>

9

1



$$(h-r) = \cos(\alpha/2) \cdot r$$

$$h = (\cos(\alpha/2) \cdot r) + r$$