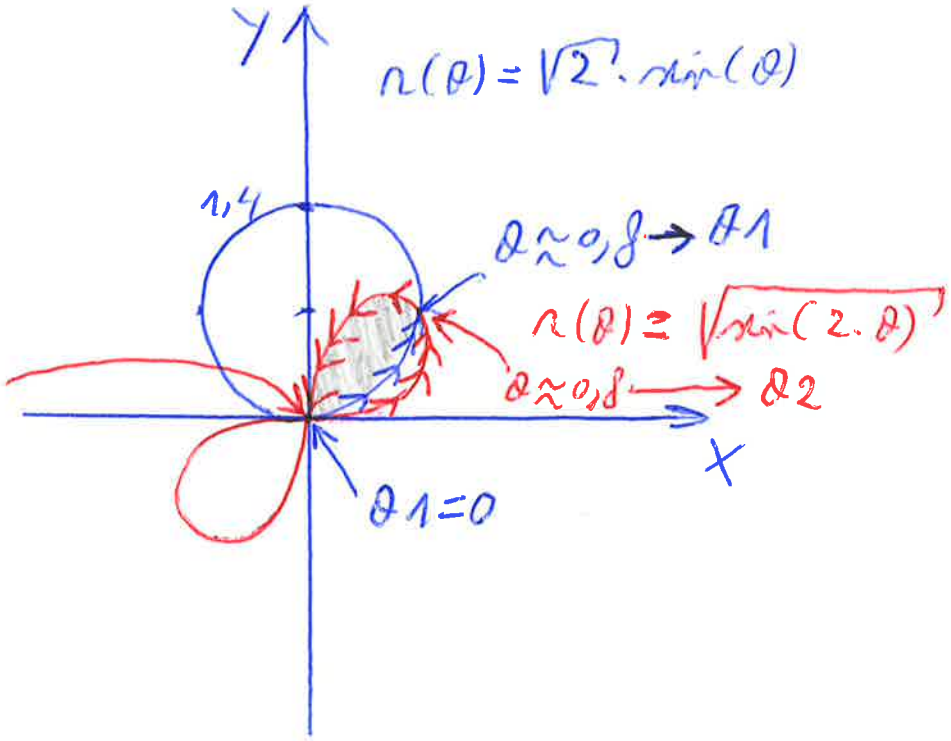
Schakel 1 - p50 - oef8



θ2 ≈ ?
Spoor maakt grote sprong!

Ingaven bepalen:

$r1(\theta1) := \sqrt{2} \cdot \sin(\theta1)$

$r2(\theta2) := \sqrt{\sin(2 \cdot \theta2)}$

solve $\left(\begin{cases} x = r1(\theta1) \cdot \cos(\theta1) \\ y = r1(\theta1) \cdot \sin(\theta1) \\ x = r2(\theta2) \cdot \cos(\theta2) \\ y = r2(\theta2) \cdot \sin(\theta2) \end{cases} , x, y, \theta1 = 0.8, \theta2 = 0.8 \right)$

$\Rightarrow$ $x = 0,7071067\,8$; $y = 0,7071067\,8$

$\theta1 = 0,785398$; $\theta2 = 0,785398$

rode lus komt tot in punt (0,0):

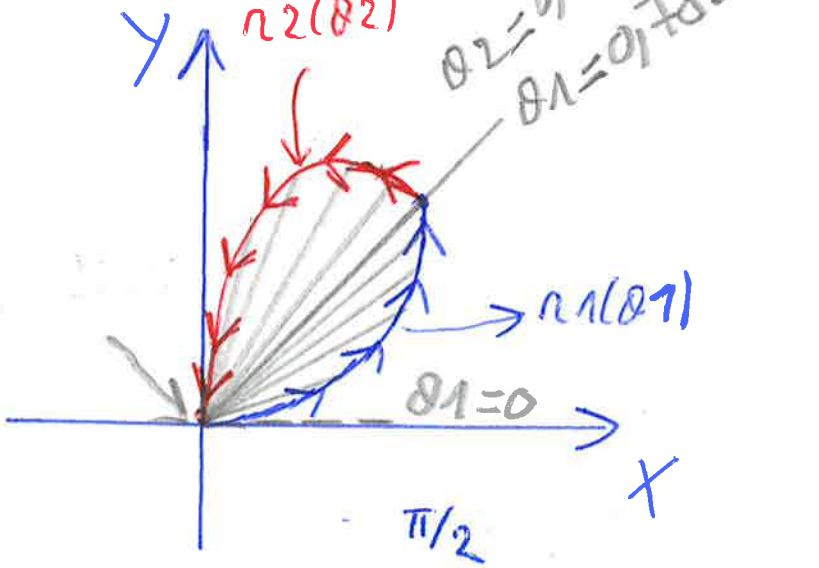
$\theta 2 \approx 3,14$

Stel $r2(\theta 2) = 0$:

solve $(r2(\theta 2) = 0, \theta 2) \mid 0 \leq \theta 2 \leq \pi$

$\Rightarrow \theta 2 = 0$ of $\boxed{\frac{\pi}{2}}$ of π

oppervlakte:



Spoor ^

$$\frac{1}{2} \cdot \int_0^{0,785398} (r1(\theta 1))^2 \cdot d\theta 1 + \frac{1}{2} \cdot \int_{0,785398}^{\pi/2} (r2(\theta 2))^2 \cdot d\theta 2$$

$= 0,392699$
