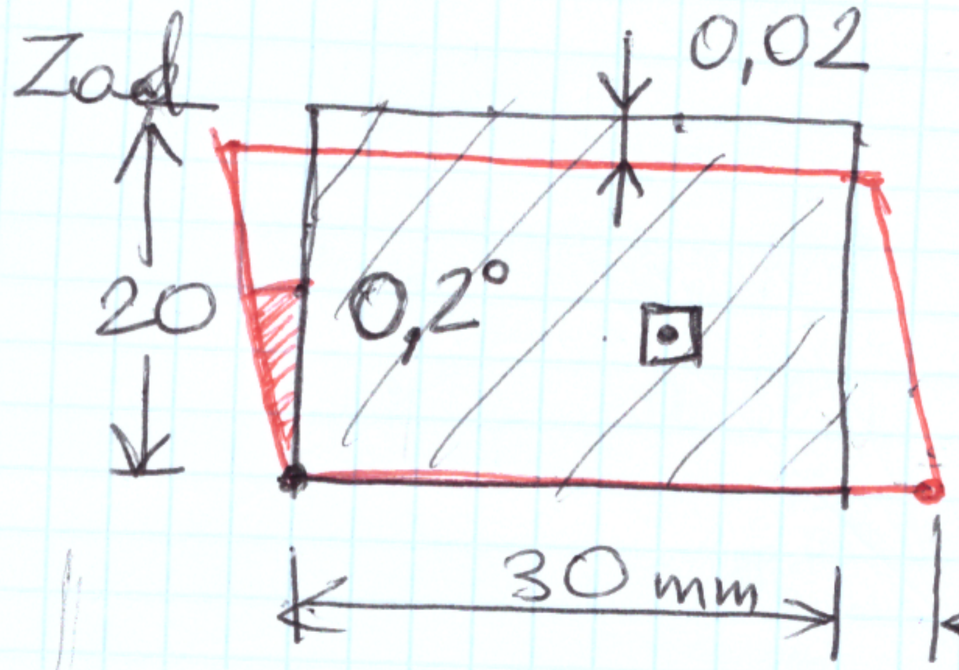
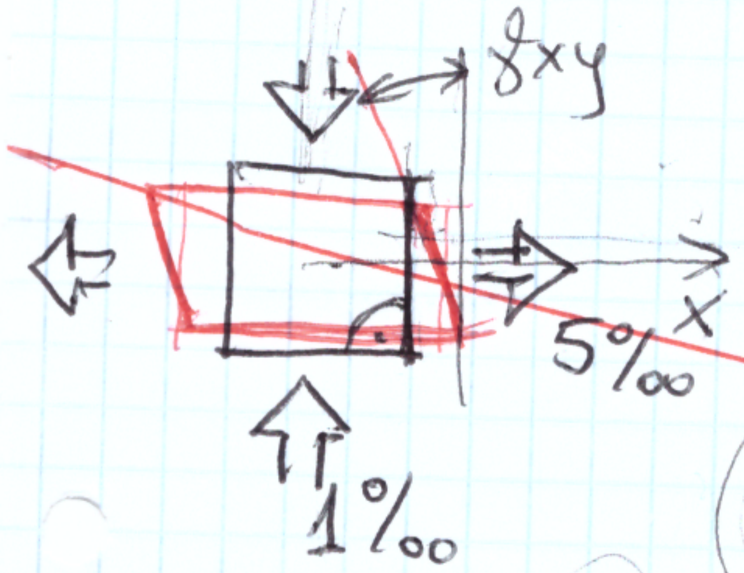


1) $\varepsilon_x, \varepsilon_y, \gamma_{xy}$?

2) $\varepsilon_1, \varepsilon_2, \alpha_0$?

3) γ_{max}

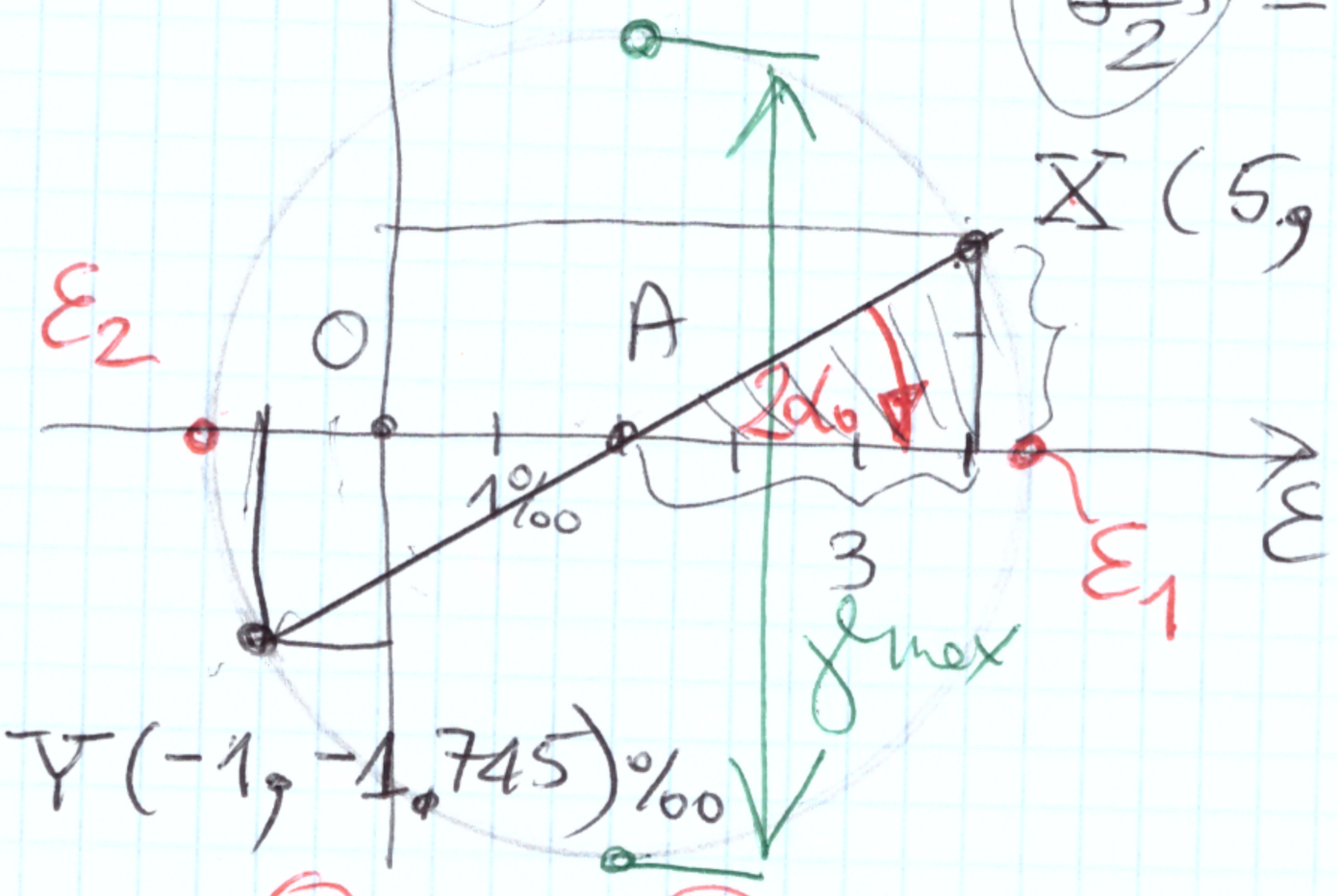


$$\varepsilon_x = \frac{30 + 0{,}15 - 30}{30} = \frac{0{,}15}{30} = 5 \cdot 10^{-3} = 5‰$$

$$\varepsilon_y = \frac{-0{,}02}{20} = -1 \cdot 10^{-3} = -1‰$$

$$\gamma_{xy} = 0{,}2° \cdot \frac{\pi}{180} = 3{,}49 \cdot 10^{-3}\ rad$$

$$\frac{\gamma_{xy}}{2} = 1{,}745 \cdot 10^{-3}$$



$$OA = \frac{5-1}{2} = 2‰$$

$$R = \sqrt{\left(\frac{5+1}{2}\right)^2 + 1{,}745^2}$$

$$R = 3{,}47‰$$

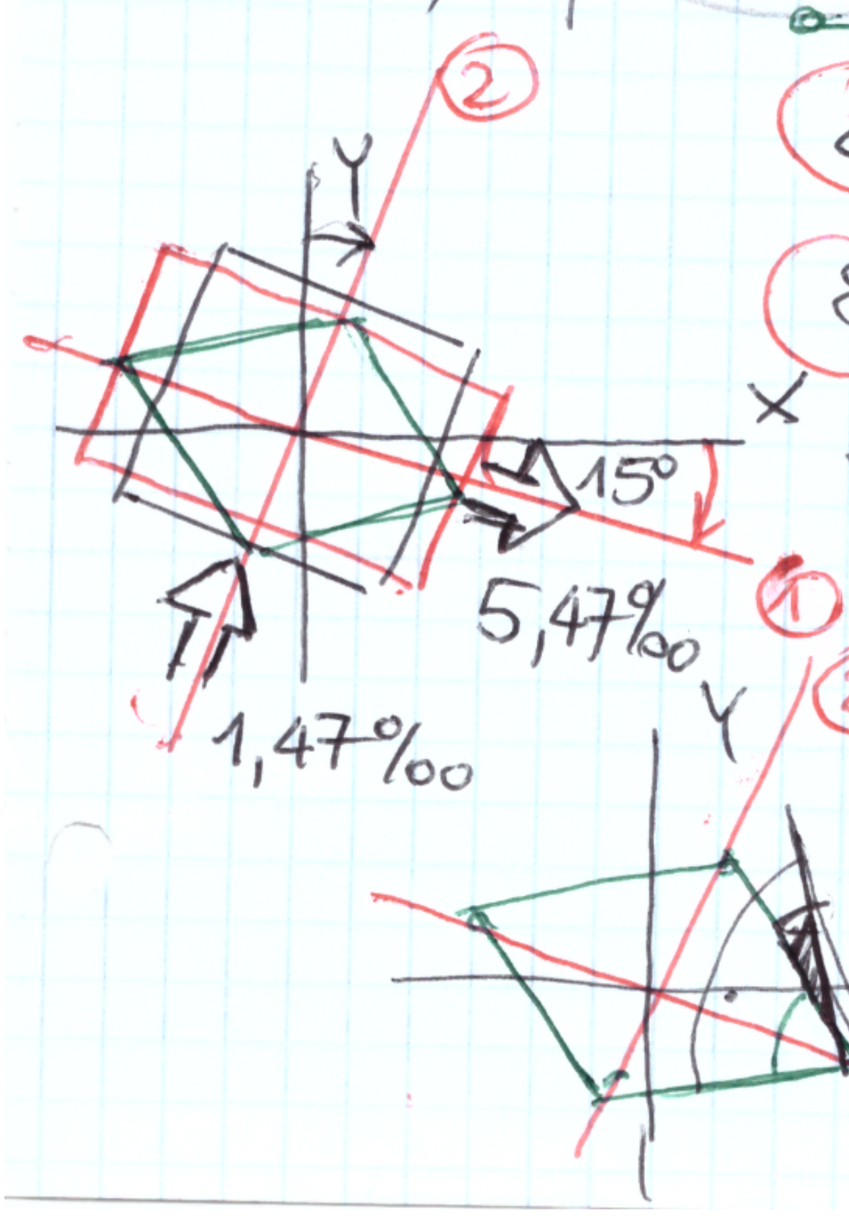
$$\varepsilon_1 = OA + R = 2 + 3{,}47 = 5{,}47‰$$

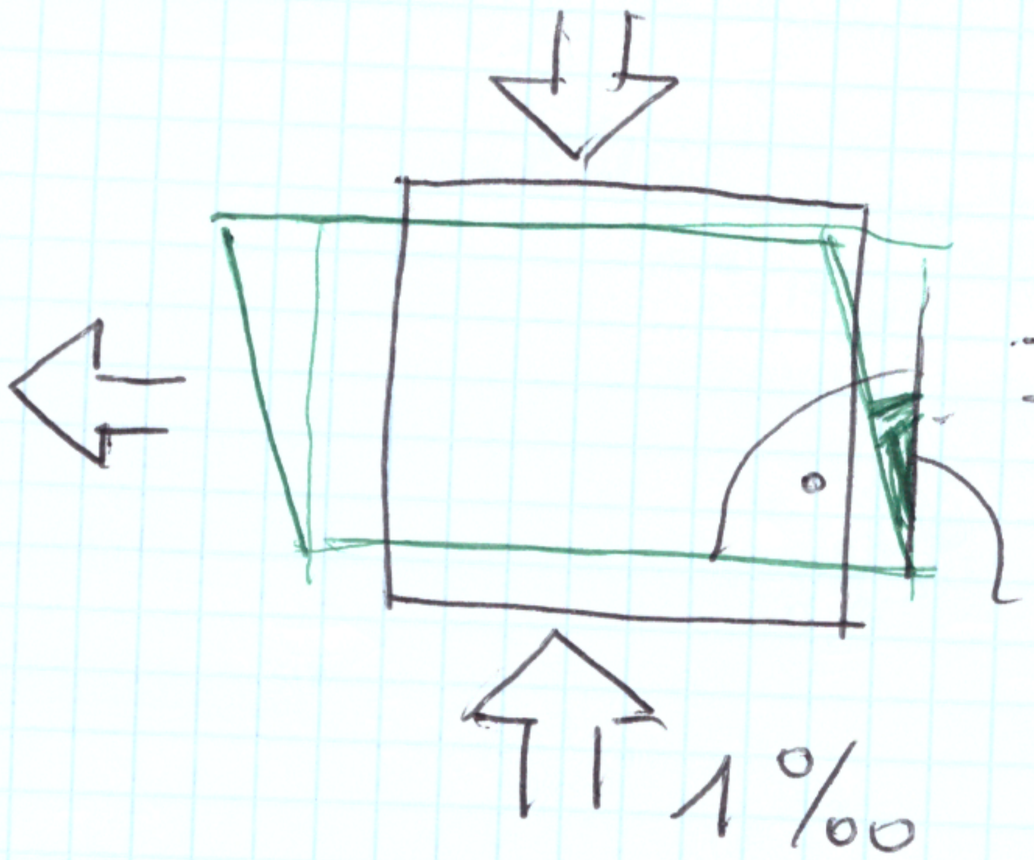
$$\varepsilon_2 = OA - R = 2 - 3{,}47 = -1{,}47‰$$

$$tg\, 2\alpha_0 = \frac{1{,}745}{3} \Rightarrow \alpha_0 = 15°$$

$$\gamma_{max} = 2R = 6{,}94 \cdot 10^{-3}\ rad$$

0.4°





$$\gamma_{xy} = 3{,}49 \cdot 10^{-3}\ rad$$

$0{,}2°$