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Diffraction enkelspalt

Första min: $\beta = \pi$

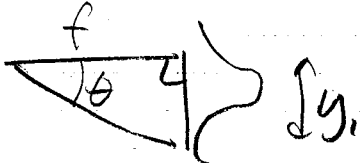
$$\beta = \frac{\pi b}{\lambda} \sin \theta$$

a) $\pi = \frac{\pi b}{\lambda} \sin \theta \Rightarrow \theta = \arcsin \frac{\lambda}{b}$

$b = \lambda$) $\theta = \arcsin 1 = 90^\circ$

$b = 5\lambda$) $\theta = \arcsin \frac{1}{5} = 11,5^\circ$

$b = 25\lambda$) $\theta = \arcsin \frac{1}{25} = 2,29^\circ$

b)  $f = 0,5 \text{ m}$

$$y_i = f \tan \theta = \begin{cases} \infty \\ 10,2 \text{ cm} \\ 2,00 \text{ cm} \end{cases}$$