

3.6

Dane:

szukane:

$$k=400$$

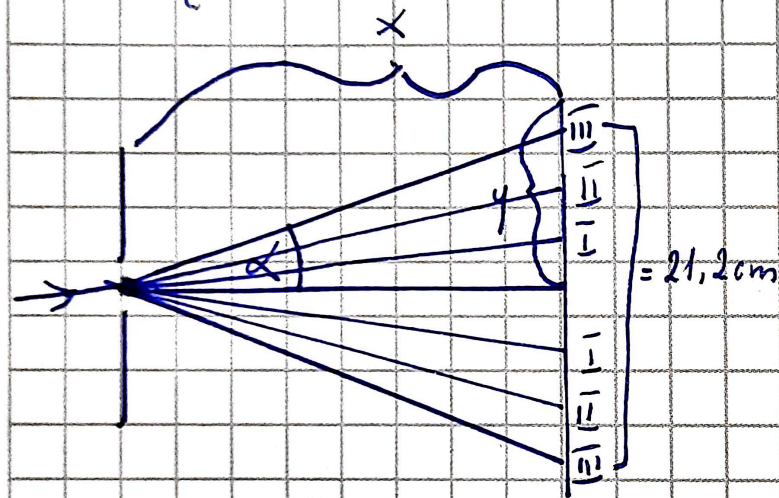
$$x=20\text{cm}$$

$$m=3$$

$$\lambda=?$$

$$d=1\text{mm}=10^{-3}\text{m} \quad l=21,2\text{cm}$$

Rozwiązanie:



$$y = \frac{l}{2}$$

$$\operatorname{tg} \alpha = \frac{y}{x}$$

$$\operatorname{tg} \alpha = \frac{l}{2x}$$

$$\operatorname{tg} \alpha = \frac{21,2\text{cm}}{2 \cdot 20\text{cm}} = 0,53 \Rightarrow \alpha \approx 28^\circ$$

$$d = \frac{a}{k}$$

$$m \cdot \lambda = d \cdot \sin \alpha$$

$$\lambda = \frac{d \cdot \sin \alpha}{m}$$

$$\lambda = \frac{10^{-3}\text{m}}{3 \cdot 400} \cdot \sin 28^\circ = 390\text{nm}$$

$$\lambda = \frac{a}{m \cdot k} \cdot \sin \alpha$$

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