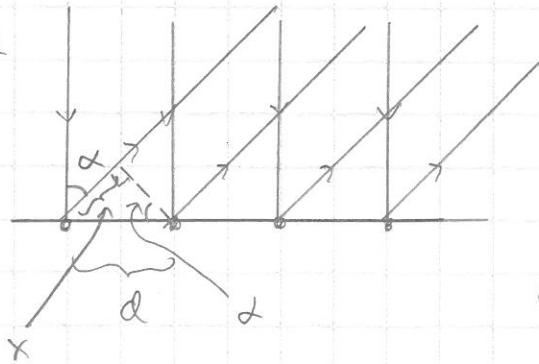


3.17



$$d = 0,66 \text{ nm}, \quad Z = 1, \quad E_k = 7,7 \cdot 10^{-18} \text{ J}$$

Sironneet aallol adheistereet
toiraaan kun $x = d \sin \alpha = Z \lambda$

Elektronien nopeus:

$$E_k = \frac{1}{2} m v^2 \quad (\Rightarrow) \quad v = \sqrt{\frac{2 E_k}{m}}$$

Elektronien de Brogliein aallonpituus: $\lambda = \frac{h}{m v} = \dots = 1,7691 \cdot 10^{-10} \text{ m}$

$$d \sin \alpha = 1 \cdot \lambda \quad (\Rightarrow) \quad \sin \alpha = \frac{\lambda}{d} \quad (\Rightarrow) \quad \underline{\alpha \approx 16^\circ}$$