

An atom of tin (Sn) has a diameter of about $2.8 \times 10^{-8} \text{ cm}$. How many Sn atoms would have to be placed side by side to span a distance of $7.0 \mu\text{m}$?

Solution:

One meter include 100 cm, so that in distance of 700 cm be able to placed side by side:
 $700 / 2.8 \cdot 10^{-8} = 2.5 \cdot 10^{10}$ in number of atoms of tin.

Answer: $2.5 \cdot 10^{10}$ atoms of tin.