

(b) From the table inside the front cover, the atomic radius for molybdenum is 0.136 nm. Therefore, the planar density for the (100) plane is

$$\text{PD}_{100}(\text{Mo}) = \frac{3}{16R^2} = \frac{3}{16(0.136 \text{ nm})^2} = 10.14 \text{ nm}^{-2} = 1.014 \times 10^{19} \text{ m}^{-2}$$

While for the (110) plane

$$\text{PD}_{110}(\text{Mo}) = \frac{3}{8R^2\sqrt{2}} = \frac{3}{8(0.136 \text{ nm})^2\sqrt{2}} = 14.34 \text{ nm}^{-2} = 1.434 \times 10^{19} \text{ m}^{-2}$$