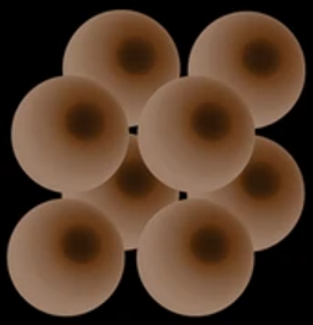
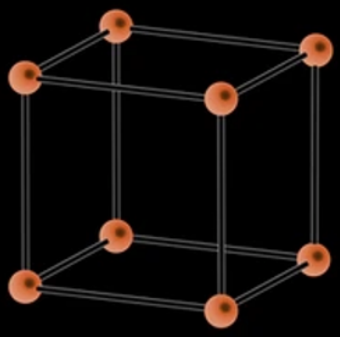
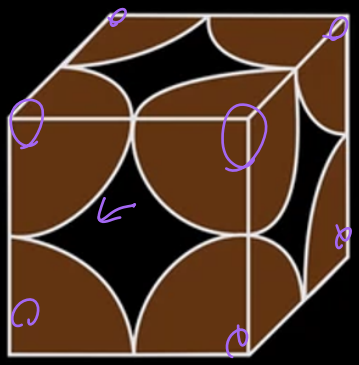
תא יחידה קובי פשוט - SC -

אחוז תפוסה של תא יחידה







$$V_{ball} = \frac{4}{3}\pi R^3 \qquad V_{cube} = a^3 \qquad a = (2R)$$

$$\%APF = \frac{V_{ball} \cdot N}{V_{cube}} \cdot 100\% = \frac{\frac{4}{3}\pi R^3 \cdot 1}{a^3}$$

$$= \frac{\frac{4}{3}\pi R^3}{(2R)^3} = \frac{\frac{4}{3}\pi R^3}{8R^3} \cdot 100\% = \boxed{52.36\%}$$

$$\rho = \frac{m}{V} \qquad \%APF = \frac{V}{V}$$