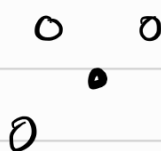
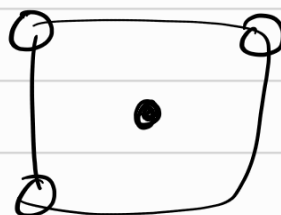


①



basis

- $(\frac{1}{2}, \frac{1}{2})$
- $(0, 0)$
- $(0, 1)$
- $(1, 1)$



$$Cu: 8 \times \frac{1}{8} \text{ (corner)} + 6 \times \frac{1}{2} \text{ (face)} = 4$$

$$O: 2 \times 1 \text{ (inside)} = 2$$

$$Cu: (0, 0, 0), (\frac{1}{2}, \frac{1}{2}, 0), (\frac{1}{2}, 0, \frac{1}{2}), (0, \frac{1}{2}, \frac{1}{2})$$

(as fcc)

$$O: (\frac{1}{4}, \frac{1}{4}, \frac{1}{4}), (\frac{3}{4}, \frac{3}{4}, \frac{3}{4})$$

②

$$Volume = \frac{mass}{density}$$

$$V_{bcc} = \frac{a^3}{2}$$

$$= \frac{1.661 \times 10^{-27}}{10.28 \times 10^{-3}}$$

$$= \frac{a^3}{2}$$

2 atoms = 1 x 1/8 corner  
2 x 95.95 x 1.661 x 10<sup>-27</sup> g

$$\sqrt[3]{\frac{2 \times 1.661 \times 10^{-27}}{10.28 \times 10^{-3}}} = a$$

$$a = 3.142 \text{ \AA}$$

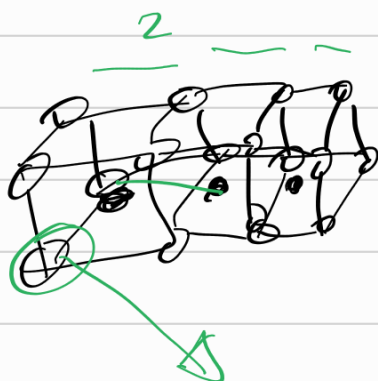
units !!

3 significant figures

③

a) Cs

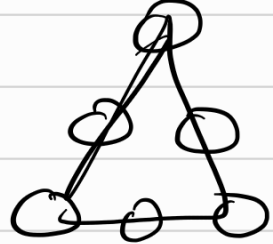
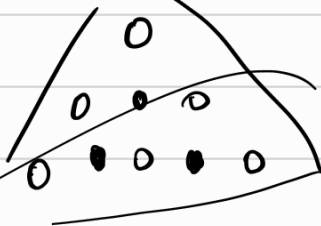
b) ~~Cs~~ Cl



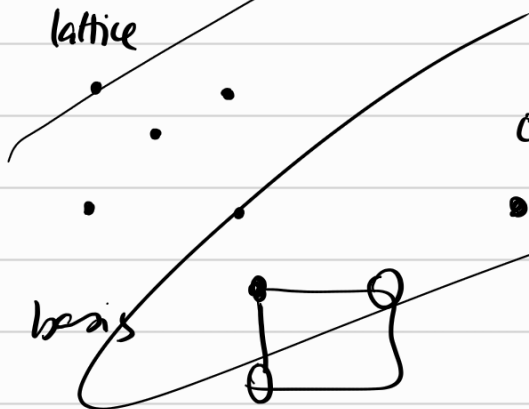
④



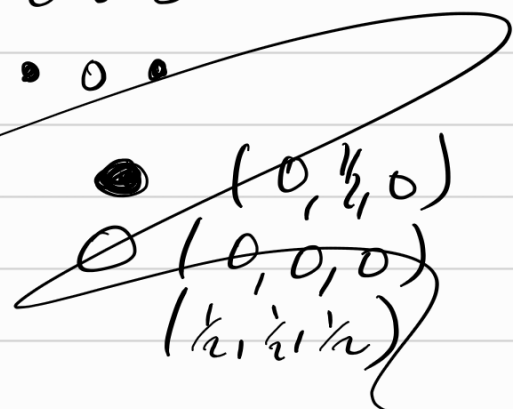
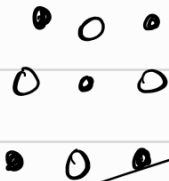
①



lattice



basis



$(0, \frac{1}{2}, 0)$   
 $(0, 0, 0)$   
 $(\frac{1}{2}, \frac{1}{2}, \frac{1}{2})$

lattice



basis

$(0, 0, 0)$

