



3. Consider the layered structures below and determine the total number of each type of atom belonging to the unit cell and empirical formulas for the compound.

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Layer 5

Potassium Atoms	Sites in the Cell	Atoms in the Unit Cell From that Site
	Corners	
	Edges	
	Faces	
	Inside	
-----	Total in Cell	

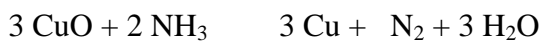
Platinum Atoms	Sites in the Unit Cell	Atoms in the Unit Cell From that Site
	Corners	
	Edges	
	Faces	
	Inside	
-----	Total in Cell	

Chloride Atoms	Sites in the Unit Cell	Atoms in the Unit Cell From that Site
	Corners	
	Edges	
	Faces	
	Inside	
-----	Total in Cell	

Use the data from the tables above.

- a. What is the total number of each type of atom in the unit cell? K \_\_\_\_;  
Pt \_\_\_\_: Cl \_\_\_\_.
- b. What is the empirical formula for this compound? \_\_\_\_\_

4. Determine the mole ratios from the balanced equation below.



CuO : Cu

NH<sub>3</sub> : CuO

N<sub>2</sub> : NH<sub>3</sub>

Cu : H<sub>2</sub>O

5. Compare the solids VO and V<sub>2</sub>O<sub>5</sub> in their attraction to a magnetic field.

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