

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### Mole Unit WS #4: Molar Conversions

A. Calculate the mass in grams for each of the following:

	Molar Mass (g/mole)	Mass (g)
1. 3.0 moles Na		
2. 2.5 moles Ca		
3. 5.0 moles Mg		
4. 3.5 moles CaCO <sub>3</sub>		
5. 0.25 moles MgCl <sub>2</sub>		
6. 3.0 moles Al <sub>2</sub> O <sub>3</sub>		
7. 0.5 moles Cl <sub>2</sub>		

	Molar Mass (g/mole)	Mass (g)
8. 6.0 moles O <sub>2</sub>		
9. 4.0 moles Al		
10. 3.0 moles H <sub>2</sub>		
11. 2.0 moles H <sub>2</sub> SO <sub>4</sub>		
12. 5.0 moles KI		
13. 1.5 moles Ca(OH) <sub>2</sub>		
14. 0.5 moles Ca(NO <sub>3</sub> ) <sub>2</sub>		

B. Calculate the number of moles for each of the following:

	Molar Mass (g/mole)	Moles
1. 200.0g F <sub>2</sub>		
2. 25.0g Li		
3. 60.0g Ne		
4. 180.0g Ca		
5. 200.0g NaOH		
6. 100.0g MgCO <sub>3</sub>		
7. 50.0g ZnO		

	Molar Mass (g/mole)	Moles
8. 150.0g Zn		
9. 160.0g Br		
10. 250.0g Fe		
11. 32.0g SO <sub>2</sub>		
12. 10.0g Na <sub>2</sub> S		
13. 60.0g K <sub>2</sub> SO <sub>4</sub>		
14. 80.0g H <sub>2</sub> O <sub>2</sub>		

C. Calculate the number of atoms, molecules, or ions for each of the following:

	Mass	Molar mass (g/mole)	# of moles	# of atoms, molecules or ions
1.			2.0 moles N atoms	
2.			0.5 moles of H atoms	
3.	46.0 g Na <sup>+</sup> ions			
4.			3.0 moles F <sup>-</sup> ions	
5.	68.0 g H <sub>2</sub> S molecules			
6.	25.0 g S atoms			
7.	45.0 g of H <sub>2</sub> O molecules			

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