

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

### Gram to Particles

Calculate the following conversions:

Show your work:

1. 12.8 g  $C_9H_{20}$  = \_\_\_\_\_  $C_9H_{20}$  molecules

2. 129 g  $C_6H_{14}$  = \_\_\_\_\_  $C_6H_{14}$  molecules

3. 360 g  $C_5H_{12}$  = \_\_\_\_\_  $C_5H_{12}$  molecules

4. 470 g  $Cu_2CO_3$  = \_\_\_\_\_  $Cu_2CO_3$  formula units

5. 132 g C = \_\_\_\_\_ C atoms

6. 87 g NaCl = \_\_\_\_\_ NaCl formula units

7. 100g  $C_7H_{16}$  = \_\_\_\_\_  $C_7H_{16}$  molecules

8. 217g  $Na_2O$  = \_\_\_\_\_  $Na_2O$  formula units

9. 43 g  $Pb^{2+}$  = \_\_\_\_\_  $Pb^{2+}$  ions

10. 100 g  $Na_2CO_3$  = \_\_\_\_\_  $Na_2CO_3$  formula units

11. 113.6 g  $C_{10}H_{22}$  = \_\_\_\_\_  $C_{10}H_{22}$  molecules

### Particles to Grams

12.  $6.02 \times 10^{23}$  formula units  $\text{MgCl}_2 =$  \_\_\_\_\_ g  $\text{MgCl}_2$

13.  $9.03 \times 10^{23}$  molecules  $\text{CH}_4 =$  \_\_\_\_\_ g  $\text{CH}_4$

14.  $1.806 \times 10^{24}$  molecules  $\text{H}_2\text{O} =$  \_\_\_\_\_ g  $\text{H}_2\text{O}$

15.  $3.612 \times 10^{24}$  atoms  $\text{Na} =$  \_\_\_\_\_ g  $\text{Na}$

16.  $1.204 \times 10^{24}$  molecules  $\text{O}_2 =$  \_\_\_\_\_ g  $\text{O}_2$

17.  $7.224 \times 10^{24}$  molecules  $\text{C}_4\text{H}_{10} =$  \_\_\_\_\_ g  $\text{C}_4\text{H}_{10}$

18.  $6.02 \times 10^{23}$  formula units  $\text{Pb}(\text{NO}_3)_3 =$  \_\_\_\_\_ g  $\text{Pb}(\text{NO}_3)_3$

19.  $1.505 \times 10^{24}$   $\text{Ca}^{+2}$  ions = \_\_\_\_\_ g  $\text{Ca}^{+2}$

20.  $2.107 \times 10^{24}$  formula units  $\text{KCl} =$  \_\_\_\_\_ g  $\text{KCl}$

21.  $2.709 \times 10^{24}$   $\text{Cl}^{-1}$  ions = \_\_\_\_\_ g  $\text{Cl}^{-1}$

22.  $3.01 \times 10^{23}$  molecules  $\text{Cl}_2 =$  \_\_\_\_\_ g  $\text{Cl}_2$