

Exercise 7.3b

Mole-Mass & Mass-Mole Conversions

Name: _____

Date: _____ Per: _____

One Step: Mole → Mass Conversions

$$\frac{\text{mol } X}{\text{1 mol } X} \left| \begin{array}{c} \text{molar mass } X \\ \hline \end{array} \right. = \text{_____ g } X$$

One Step: Mass → Mole Conversions

$$\frac{\text{g } X}{\text{molar mass } X} \left| \begin{array}{c} \text{1 mol } X \\ \hline \end{array} \right. = \text{_____ mol } X$$

DIRECTIONS: Calculate the mass of:

1. 1.00 mol C₂H₅OH

2. 0.638 mol Ba(CN)₂

3. 0.0100 mol O₂

4. 7.18 × 10⁻⁴ mol Ar

DIRECTIONS: Calculate the number of moles in:

5. 87.4 g CaBr₂

6. 12.5 g C₂H₄

7. 1.25 kg H₂

8. 146 g He

One Step: Mole → Particles Conversion

$$\frac{\text{mol } X}{\text{1 mol } X} \left| \begin{array}{c} 6.022 \times 10^{23} \text{ p. } X \\ \hline \end{array} \right. = \text{_____ p. } X$$

One Step: Particle → Mole Conversions

$$\frac{\text{p. } X}{6.022 \times 10^{23} \text{ p. } X} \left| \begin{array}{c} \text{1 mol } X \\ \hline \end{array} \right. = \text{_____ mol } X$$

DIRECTIONS: Calculate the number of representative particles in:

9. 1.26 mol NbI₅

10. 0.249 mol C₂H₅OH

11. 2.00 mol NaCl

12. 0.0250 mol NH₄IO₃

Exercise 11.3a

Mole-Mass & Mass-Mole Conversions

Name: _____

Date: _____ Per: _____

DIRECTIONS: Calculate the number of moles in:

15. 8.54×10^{23} f.u. CaBr_2

13. 4.58×10^{24} f.u. $\text{Ba}(\text{CN})_2$

16. 1.35×10^{24} atoms Na

14. 2.10×10^{25} m. O_2

Exercise 7.3b

Particle-Mass & Mass-Particle Conversions

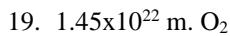
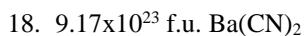
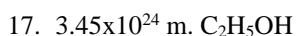
Name: _____

Date: _____ Per: _____

Two Step: Particle → Mass Conversions

$$\frac{p. X}{6.022 \times 10^{23} p. X} \left| \begin{array}{c} 1 \text{ mol } X \\ 6.022 \times 10^{23} \text{ p. } X \end{array} \right| \frac{\text{molar mass } X}{1 \text{ mol } X} = \text{_____ g } X$$

DIRECTIONS: Calculate the mass of:



Two Step: Mass → Particle Conversions

$$\frac{-g X}{\text{molar mass } X} \left| \begin{array}{c} 1 \text{ mol } X \\ 6.022 \times 10^{23} \text{ p. } X \end{array} \right| \frac{6.022 \times 10^{23} p. X}{1 \text{ mol } X} = \text{_____ p. } X$$

DIRECTIONS: Calculate the number of particles in:

