

Name _____ Date _____ Period _____

Mole Worksheet #1: moles ↔ particles

Converting moles to particles: 1 mole = 6.02×10^{23} particles (atoms, molecules, ions...)

Show the factor label method on ALL problems!!!!

Part 1. Determine the number of representative particles in each of the following.

A. 0.250 mol silver

B. 8.56×10^{-3} mol NaCl

C. 35.4 mol CO₂

D. 0.425 mol N₂

Part 2. Determine the number of moles in each of the following.

A. 3.25×10^{20} atoms Pb

B. 4.96×10^{24} molecules glucose

C. 1.56×10^{23} formula units NaOH

D. 1.25×10^{25} Cu²⁺ ions

Part 3. Make the following conversions.

A. 1.51×10^{15} atoms Si to mol Si

B. 4.25×10^{-2} mol NO₂ to molecules NO₂

C. 8.95×10^{25} molecules CCl₄ to mol CCl₄

D. 5.90 mol Ca to atoms Ca