Name _____ Chemistry
Chapter 7.1

Moles, Molecules and Gram Conversions #3

Directions: Make the following conversions using the definitions listed below:

1 mole = molar mass of a substance

1 mole = 6.022×10^{23} of that substance

1. How many grams are in 5 moles of water? Fill in the blanks and solve. Don't forget units!!

_____ moles (_____) =

2. How many moles are in 327 grams of potassium oxide (K_2O)? Fill in the blanks and solve. Don't forget units!!

_____ grams (_____) =

3. How many grams are in 1.6 moles of sodium chloride (NaCl)? Fill in the blanks and solve. Don't forget units!!

_____ moles (_____) =

4. How many moles are in 27.2 grams of calcium hydroxide $Ca(OH)_2$? Fill in the blanks and solve. Don't forget units!!

_____ grams (_____) =

5. How many potatoes are in 1 mole of potatoes? Fill in the blanks and solve. Don't forget units!!

_____ mole $\left(\frac{\text{_____}}{\text{_____}}\right)$ =

6. How many molecules are in 5 moles of CO_2? Fill in the blanks and solve. Don't forget units!!

_____ moles $\left(\frac{\text{_____}}{\text{_____}}\right)$ =

7. How many molecules are in 500 grams of N_2O? Fill in the blanks and solve. Don't forget units!!

_____ grams $\left(\frac{\text{_____}}{\text{_____}}\right)\left(\frac{\text{_____}}{\text{_____}}\right)$ =

7. How many grams are in 5.0×10^{28} molecules of N_2O? Fill in the blanks and solve. Don't forget units!!

_____ molecules $\left(\frac{\text{_____}}{\text{_____}}\right)\left(\frac{\text{_____}}{\text{_____}}\right)$ =