Mole Practice Problems

Please do not write on this paper

Directions: Complete the following table. The first row has been done for you. Make sure your units have the correct units and number of significant figures.

Substance	**Name**	**Representative Particles** (atoms, ions, molecules, or formula units)	**Molar Mass**	**Amount** (moles)	**Number of Representative Particles**	**Mass** (grams)
NaCl	sodium chloride	formula units	58.44 g/mol	2.25 mol	1.35×10^{24}	131 g
H_2O				0.54 mol		
$Ca(NO_3)_2$					5.49×10^{23}	
H_2SO_4	sulfuric acid	molecules				184.92 g
K^+				1.65 mol		
Al					6.28×10^{25}	

Directions: Answer the following questions. Show your work.

1. How many hydrogen atoms are in 4.00 moles of methane, CH_4?

2. How many potassium ions are in 26.00 grams of potassium sulfate, K_2SO_4?

3. How many grams of calcium are in 710.55 grams of calcium chloride, $CaCl_2$?