Mole Problems

Name_____

Examples

1. .25 mol Ag = .25 mol(107.9 g/mol) = 26.98 g
2. .75 mol Cr = .75mol (52.0 g/mol) = 39 g
3. 27.93 g Fe = 27.93 g(1mol/55.85 g) = .5 mol
4. 4.0 g Ca = 4.0 g(1mol/40.0 g) = .1 mol
5. $3.01*10^{23}$ atoms K = $3.01*10^{23}$atoms(1mol/$6.02*10^{23}$atoms) = .5 mol
6. $1.51*10^{23}$ atoms Fr = $1.51*10^{23}$atoms(1mol/$6.02*10^{23atoms}$) = .251 mol
7. .25 mol Ag = .25mol ($6.02*10^{23}$atoms/1mol) = $1.51*10^{23}$ atoms
8. .75 mol Cr = .75 mol($6.02*10^{23}$atoms/1mol) = $4.52*10^{23}$ atoms

Part 1: Directions: Determine the number of moles in each sample.

1. 5.75 g Na
2. 17.6 g K
3. 39.3 g Ca
4. 339.0 g Ra
5. 3.73 g B

Part 2: Directions: Determine the mass of each sample.

1. 1.98 mol Zn
2. .57 mol Rb
3. 3 mol Pt
4. 4.5 mol Ga
5. .01 mol Cu

Part 3: Directions: Determine how many atoms are in each sample.

1. 1.6 mol Na
2. .016 mol K
3. .963 mol Ca
4. .457 mol Ra
5. .75 mol B

Part 4: Directions: Determine how many moles of each substance there are.

1. $1.19*10^{23}$ atoms V
2. $3.43*10^{23}$ atoms Fe
3. $1.81*10^{23}$ atoms Co
4. $2.71*10^{23}$ atoms Ga
5. $6.02*10^{21}$ atoms Cu