

# Practice Problems (Red Glencoe book)

2/11/13

p 324, Q # 5, 6, 13, 14

5. How many moles contain each of the following?

a.  $5.75 \times 10^{24}$  atoms Al

b.  $2.50 \times 10^{20}$  atoms Fe

6. Identify the representative particle for each formula and convert the given number of RPs to moles.

a.  $3.75 \times 10^{24}$  CO<sub>2</sub>

b.  $3.58 \times 10^{23}$  ZnCl<sub>2</sub>

13. Calculate the number of RPs of each substance.

a. 11.5 mol Ag

c. 0.150 mol NaCl

b. 18.0 mol H<sub>2</sub>O

d.  $1.35 \times 10^{-2}$  mol CH<sub>4</sub>

14. Arrange these three sample from smallest to largest in terms of number of representative particles:  $1.25 \times 10^{25}$  atoms of zinc (Zn), 3.56 mol of iron (Fe), and  $6.78 \times 10^{22}$  molecules of glucose (C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>)

P 328, Q# 15, 17, 18

15. Determine the mass in grams of each of the following.

a. 3.57 mol Al

b. 42.6 mol Si

17. Determine the number of moles in each of the following.

a. 25.5 g Ag

b. 300.0 g S

18. Convert each mass to moles. Express the answer in scientific notation.

a.  $1.25 \times 10^3$  g Zn

b. 1.00 kg Fe