**Practice Problems**

Calculate the grams present in:

1) 0.200 moles of H2S

2) 0.100 moles of KI

3) 1.500 moles of KClO

4) 0.750 moles of NaOH

5) 3.40 x 10¯5 moles of Na2CO3

**Answers**

1) 0.200 moles of H2S

Step One: the problem gives 0.200 mole

Step Two: the molar mass of H2S is 34.076 grams/mole

Step Three: 0.200 mole x 34.076 grams/mole = 6.82 gram (when rounded off to the correct number of significant figures)

Set up as a proportion, this problem looks like this:



Cross-multiply and divide to get the answer given above.

2) 0.100 moles of KI

Step One: the problem gives 0.100 mole

Step Two: the molar mass of KI is 166.003 grams/mole

Step Three: 0.100 mole x 166.003 grams/mole = 16.6 gram (when rounded off to the correct number of significant figures)

Set up as a proportion, this problem looks like this:



3) 1.500 moles of KClO

Step One: the problem gives 1.500 mole (note four significant figures)

Step Two: the molar mass of KClO is 90.551 grams/mole

Step Three: 1.500 mole x 90.551 grams/mole = 135.8 gram (when rounded off to the correct number of significant figures)

Set up as a proportion, this problem looks like this:



4) 0.750 moles of NaOH

Step One: the problem gives 0.750 mole

Step Two: the molar mass of NaOH is 39.997 grams/mole

Step Three: 0.750 mole x 39.997 grams/mole = 30.0 gram (when rounded off to the correct number of significant figures)

Set up as a proportion, this problem looks like this:



5) 3.40 x 10¯5 moles of Na2CO3

Step One: the problem gives 3.40 x 10¯5 mole (note three significant figures)

Step Two: the molar mass of Na2CO3 is 105.989 grams/mole

Step Three: 3.40 x 10¯5 mole x 105.989 grams/mole = 3.60 x 10¯3 gram (when rounded off to the correct number of significant figures)

Please note that 3.60 x 10¯3 can be expressed as 0.00360.

Set up as a proportion, this problem looks like this:

