

# MIXED MOLE PROBLEMS

Name \_\_\_\_\_

Solve the following problems.

1. How many grams are there in  $1.5 \times 10^{25}$  molecules of  $\text{CO}_2$ ?

\_\_\_\_\_

2. What volume would the  $\text{CO}_2$  in Problem 1 occupy at STP?

\_\_\_\_\_

3. A sample of  $\text{NH}_3$  gas occupies 75.0 liters at STP. How many molecules is this?

\_\_\_\_\_

4. What is the mass of the sample of  $\text{NH}_3$  in Problem 3?

\_\_\_\_\_

5. How many atoms are there in  $1.3 \times 10^{22}$  molecules of  $\text{NO}_2$ ?

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6. A 5.0 g sample of  $\text{O}_2$  is in a container at STP. What volume is the container?

\_\_\_\_\_

7. How many molecules of  $\text{O}_2$  are in the container in Problem 6? How many atoms of oxygen?

\_\_\_\_\_

\_\_\_\_\_

# PERCENTAGE COMPOSITION

Name \_\_\_\_\_

Determine the percentage composition of each of the compounds below.

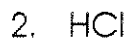


K = \_\_\_\_\_

Mn = \_\_\_\_\_

O = \_\_\_\_\_

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H = \_\_\_\_\_

Cl = \_\_\_\_\_

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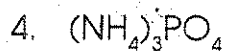


Mg = \_\_\_\_\_

N = \_\_\_\_\_

O = \_\_\_\_\_

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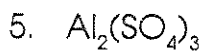
N = \_\_\_\_\_

H = \_\_\_\_\_

P = \_\_\_\_\_

O = \_\_\_\_\_

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Al = \_\_\_\_\_

S = \_\_\_\_\_

O = \_\_\_\_\_

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Solve the following problems.

6. How many grams of oxygen can be produced from the decomposition of 100. g of  $\text{KClO}_3$ ? \_\_\_\_\_

7. How much iron can be recovered from 25.0 g of  $\text{Fe}_2\text{O}_3$ ? \_\_\_\_\_

8. How much silver can be produced from 125 g of  $\text{Ag}_2\text{S}$ ? \_\_\_\_\_

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