[Stoichiometry](https://dist-ed.waketech.edu/webapps/gradebook/do/student/viewGrades?course_id=_64129_1&callback=portal)

Question 1

What is the molar mass of propane (C3H8)? Use the average molar masses on the periodic table. Do not include units. Round to two decimal places.

Question 2

What is the percent composition of carbon in sodium carbonate (Na2CO3)? Use the average molar masses on the periodic chart, do not include units, round to two decimal places. Do not include the percent sign.

Question 3

Chemical species on the left of the arrow are called while those on the right of the arrow are called.

Question 4

Chemical species that are dissolved in water are called \_\_\_\_\_\_\_\_\_\_\_\_\_ solutions.

Question 5

When the following equation is balanced, the coefficient for oxygen is\_\_\_\_? Use a number, not a word.

\_\_\_\_KCl + \_\_\_ O2 --> \_\_\_ KClO3

Question 6

Balance the following equations. Use whole numbers. If the coefficient is 1, you must put it in.

C4H10 + O2 --> CO2 + H2O

N2 + H2 --> NH3

Na + Cl2 --> NaCl

Question 7

a. Calculate the number of atoms in 3.4 moles of Ne. Use the format 6.02E+23 for 6.02 x1023.

b. Calculate the number of atoms in 3.4 g of Ne. Use the molar mass to two decimal places.Use the format 6.02E+23 for 6.02 x1023.

Question 8

How many moles of carbon are present in 81.5 g of carbon. Use the molar mass found on the periodic table in the front of your text. Round your answer to two decimal places, do not include units in your answer.

Question 9

How many grams of water (H2O) are found in 1.9 moles of water?Use the molar mass found on the periodic table in the front of your text. Round your answer to two decimal places, do not include units in your answer.

Question 10

a. How many atoms of hydrogen are in 25.0 g of ammonia (NH3)? Use the format 6.02E+23 for 6.02 x 1023

b. How many atoms of nitrogen are in the same amount of ammonia? Use the molar mass to two decimal places found on the periodic table in the front of your text.

Question 11

A compound with a percent composition by mass of 87.5% N and 12.5% H was recently discovered. What is the empirical formula of this compound?

Question 12

Calculate the percent composition by mass of nitrogen in ammonium nitrate (NH4NO3)

Question 13

What mass of copper(II) nitrate would be produced from the complete reaction of 52.7 g of copper, according to the chemical reaction shown below?

Cu + 2 AgNO3 ----> Cu(NO3)2 + 2 Ag

Use the masses to two decimal places using the periodic chart. Round your answer to two decimal places, do not include units.

Question 14

Anhydrous aluminum oxide can be reduced to aluminum according to thisa chemical equation: 2 Al2O3 (s) ---> 4 Al (l) + 3 O2 (g) Calculate the mass of aluminum oxide reacted if 63.9 g of Al was produced and the percent yield was found to be 89.3%

Question 15

Solid magnesium metal reacts with chlorine gas according to the following equation:

Mg + Cl2 --> MgCl2

What mass of magnesium chloride is formed in the reaction between 7.8 g of Mg and 6.9 g of Cl2

use the masses to two decimal places on the chart. Round your answer to two decimal places, do not include units.

Question 16

Predict the products for the following reactions. Use the format CO2 for CO2. You will also need to balance the equation when finished. Retype the entire balanced equation with products.

a. C2H6 + O2 -->

b. KCl -->

Question 17

Match the following reactions with type. Equations may or may not be balanced.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | |  | 8 Fe + S8 --> 8 FeS  [Read Answer Items for Question 17](http://dist-ed.waketech.edu/webapps/assessment/take/launch.jsp?course_assessment_id=_330617_1&course_id=_64129_1&content_id=_4901758_1&step=null) | |  | C10H8 + 12 O2 ---> 10 CO2 + 4 H2O  [Read Answer Items for Question 17](http://dist-ed.waketech.edu/webapps/assessment/take/launch.jsp?course_assessment_id=_330617_1&course_id=_64129_1&content_id=_4901758_1&step=null) | |  | H2 + O2 --> H2O  [Read Answer Items for Question 17](http://dist-ed.waketech.edu/webapps/assessment/take/launch.jsp?course_assessment_id=_330617_1&course_id=_64129_1&content_id=_4901758_1&step=null) | |  | 2Li + Cl2 --> 2LiCl  [Read Answer Items for Question 17](http://dist-ed.waketech.edu/webapps/assessment/take/launch.jsp?course_assessment_id=_330617_1&course_id=_64129_1&content_id=_4901758_1&step=null) | |  | CH4 + O2 --> CO2 + H2O  [Read Answer Items for Question 17](http://dist-ed.waketech.edu/webapps/assessment/take/launch.jsp?course_assessment_id=_330617_1&course_id=_64129_1&content_id=_4901758_1&step=null) | |  | MgCO3 --> MgO + CO2  [Read Answer Items for Question 17](http://dist-ed.waketech.edu/webapps/assessment/take/launch.jsp?course_assessment_id=_330617_1&course_id=_64129_1&content_id=_4901758_1&step=null) | | Answer   |  |  | | --- | --- | | A. | Combination | | B. | Combustion | | C. | Decomposition | |