

Name:

Date:

Mole Conversions Worksheet



1.) What is a mole?

2.) What is the purpose of using a mole?

Conversions:

1 dozen = 12 of anything

1 mole = 6.02×10^{23} atoms/molecules/particles/anything

Convert the following:

3.) Convert 156 donuts to dozens:

4.) Convert 43 dozens to donuts:

Atoms/Molecules to Moles

5.) Convert 4.214×10^{24} molecules to moles:

6.) Convert 6.543×10^{23} atoms to moles:

7.) Convert 1.06×10^{23} carbon atoms to moles:

8.) Convert 0.500 moles of aluminum to atoms:

9.) Convert 0.0012 moles of water to molecules:

10.) Convert 1.50 moles to atoms:

11.) Draw a diagram showing how the conversions can be made in moles for grams to moles, moles to grams, atoms to moles, and moles to atoms.

12.) Which weighs more, a mole of Carbon or a mole of Calcium?

Grams to Moles

12.) Calculate the MW of the following compounds to the thousandth place.

a. H_2O

b. $\text{C}_6\text{H}_{12}\text{O}_6$

c. CaCO_3

d. FeCl_3

13.) Calculate the number of moles in 48.00 grams of water.

14.) Calculate the number of moles in 400.12 grams of glucose.

15.) Calculate the number grams in 1.456 moles of calcium carbonate.

16.) Calculate the number of grams in 2.156 moles of sodium chloride.

Two step:

17.) Calculate the number of grams in 18.04×10^{24} molecules of water.

18.) Calculate the number of molecules in 16.5 grams of calcium carbonate.

19.) Calculate the number of grams in 10.1×10^{-22} atoms of sodium.