Card C

$\_\_\_\_\ C_2H_6 + \_\_\_\_\_O_2 \rightarrow \_\_\_\_CO_2 + \_\_\_\_\ H_2O$

How many molecules are in 489g of CO_3?

C

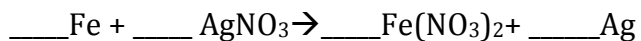How many molecules are in .043 moles of HCl?

How many grams are in 1.72 moles of K_2S?

Card 0

How many moles are in 98.3 grams of aluminum hydroxide?

0

How many molecules are in 2.41 grams of KOH?

How many grams are in 4.13×10^{23} molecules of $MgSO_4$?

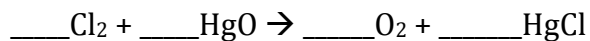$\_\_\_\_Fe + \_\_\_\_\ AgNO_3 \rightarrow \_\_\_\_Fe(NO_3)_2 + \_\_\_\_\_Ag$

Card H

How many grams are in 4.5 moles of sodium fluoride?

Molar Mass $(NH_2)_2SO_4$

H

Molar Mass: PO_4

How many molecules of CH_4 are present in .41 moles?

Card L

$\_\_\_\_Cl_2 + \_\_\_\_HgO \rightarrow \_\_\_\_\_O_2 + _____HgCl$

Molar Mass: $MgCl_2$

L

How many grams are in .00206 moles of phosphorous?

How many grams are in 8.71 moles of ammonia?

Card V

How many grams are in 8.49×10^{23} molecules of NaCl?

Molar Mass: $Ga_2(SO_3)_3$

V

Molar Mass: Cl_2

___ $AgNO_3$ + ___ $NaOH \rightarrow$ ___ $AgOH$ + ___ $NaNO_3$

Card E

Molar Mass: KO_2

How many grams are in 2.06×10^{-4} moles of calcium phosphate?

E

Molar Mass: $Ca_3(PO_4)_2$

How many moles are in 148.4 grams of K_3PO_4?

How many molecules of water are found in 7.38 grams of H_2O?

3

How many molecules are in 39.72g of $NaNO_3$?

How many grams are present in 3.24×10^{24} molecules of NH_3?

_____C_8H_{16}+_____O_2→ _____CO_2 + _____H_2O
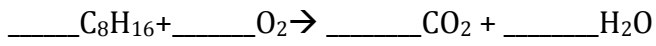
How many grams are in 9.39×10^{23} molecules of phosphate?

M

How many grams are in .465 moles of gold?

Molar Mass: CCl_2F_2

___$NaNO_3$ + ___PbO → ___$Pb(NO_3)_2$ + ___Na_2O

How many moles are in 68 grams of copper (II) hydroxide?

HCl + _____ Mg → _____ MgCl₂ + _____ H₂

R

Molar Mass: Pb(NO₃)₂

How many molecules are in .84 moles of sodium hydroxide?

Instructions for the Puzzle Activity:

The pieces provided will form a 3x3 puzzle.

Have students cut out all puzzle pieces first – don't let them try to decipher the puzzle before doing the work!

Students should work out all problems first, then begin to find matching pieces to complete the puzzle.

      If a 'match' doesn't have an exact match, they should do both problems again to find their error (Disclaimer- 'matches' could be within .05-.10 of each other – depending on rounding of molar mass)

For matches of the balancing equations problems, they should match in the sequence of coefficients

      EX: 1,2,2,1 matches 1,2,2,1

To make grading easier, the puzzle should spell "C H 3 M L O V E R" in zig zag pattern by starting in the upper left corner, moving to the bottom left corner, to the middle, up to the top, then to the right side and ending in the bottom right corner.