	T	T	T
How many moles of sodium atoms correspond to 1.56x10 <sup>21</sup> atoms of sodium?	How many moles of Al are in 2.16 mol of Al <sub>2</sub> O <sub>3</sub> ?	How many moles of H <sub>2</sub> and N <sub>2</sub> can be formed by the decomposition of 0.145 mol of ammonia, NH <sub>3</sub> ?	What is the total number of atoms in 0.260 mol of glucose, C <sub>6</sub> H <sub>12</sub> O <sub>6</sub> ?
2.59 x10 <sup>-3</sup> mol Na	4.32mol Al	$0.0725$ mol $N_2$ , $0.218$ mol $H_2$	1.57x10 <sup>23</sup> atoms
What is the mass of 1.00 mol of Sodium?	What is the mass of 1.00 mol of Sulfur?	What is the mass of 1.00 mol of Chlorine?	Determine the mass in grams of 1.35 mol Fe
23.0g Na	32.1g S	35.5g CI	75.4g Fe
Determine the mass in grams of 24.5 mol O	Determine the mass in grams of 0.876mol Ca	Determine the mass in grams of 1.25mol Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	Determine the mass in grams of 0.625 mol Fe(NO <sub>3</sub> ) <sub>3</sub>
392g	35.1g Ca	388g Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	151g Fe(NO <sub>3</sub> ) <sub>2</sub>
Determine the mass in grams of 0.600 mol C <sub>4</sub> H <sub>10</sub>	Determine the mass in grams of 1.45 mol (NH <sub>4</sub> ) <sub>2</sub> CO <sub>3</sub>	Calculate the number of moles of 21.5 g CaCO <sub>3</sub>	Calculate the number of moles of 1.56 g NH <sub>3</sub>
34.9g C <sub>4</sub> H <sub>10</sub>	139g (NH <sub>4</sub> ) <sub>2</sub> CO <sub>3</sub>	0.215mol	0.0916mol
Calculate the number of moles of 16.8 g	Balance the following reaction:	Balance the following reaction:	Balance the following reaction:
Sr(NO <sub>3</sub> ) <sub>2</sub>	Ca(OH) <sub>2</sub> +HCl → CaCl <sub>2</sub> + H <sub>2</sub> O	AgNO <sub>3</sub> +CaCl <sub>2</sub> → Ca(NO <sub>3</sub> ) <sub>2</sub> +AgCl	$Fe_2O_3 + C \rightarrow Fe + CO_3$
0.0794mol	Ca(OH) <sub>2</sub> + 2HCl → CaCl <sub>2</sub> + 2H <sub>2</sub> O	2AgNO <sub>3</sub> +CaCl <sub>2</sub> → Ca(NO <sub>3</sub> ) <sub>2</sub> + 2AgCl	Fe2O3 + C → 2Fe + CO3

Write and balance the following: Sodium Bicarbonate and Sulfuric Acid react to produce Sodium Sulfate, Water, and Carbon Dioxide	Write and balance the following: Aluminum Oxide and Sulfuric Acid react to produce Aluminum Sulfate and Water	Write and balance the following: Sodium Carbonate and Water react to produce Carbonic Acid and Sodium Oxide	Write and balance the following: Magnesium Phosphate and Potassium Sulfide react to produce Magnesium Sulfide and Potassium Phosphate
2NaHCO <sub>3</sub> +H <sub>2</sub> SO <sub>4</sub> → Na <sub>2</sub> SO <sub>4</sub> + 2H <sub>2</sub> O+2CO <sub>2</sub>	$Al_2O_3 + 3H_2SO_4 \rightarrow Al_2(SO_4)_3 + 3H_2O$	$Na_2CO_3 + H_2O \rightarrow H_2CO_3 + Na_2O$	$Mg_3(PO_4)_2 + 3K_2S \rightarrow 3MgS + 2K_3PO_4$
$Na_2S_2O_3+4Cl_2+$ $5H_2O \rightarrow NaHSO_4+$ 8HCI	$Na_2S_2O_3+4CI_2+$ $5H_2O \rightarrow NaHSO_4+$ 8HCI	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + 4Cl <sub>2</sub> + 5H <sub>2</sub> O → NaHSO <sub>4</sub> + 8HCl	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> + 4Cl <sub>2</sub> + 5H <sub>2</sub> O → NaHSO <sub>4</sub> + 8HCl
How many moles of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> are needed to react with 0.12mol of Cl <sub>2</sub> ?	How many moles of Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> are needed to react with 0.12mol of Cl <sub>2</sub> ?	How many moles of H <sub>2</sub> O are required for the reaction of 0.12mol of Cl <sub>2</sub> ?	How many moles of H <sub>2</sub> O react if 0.24mol HCl is formed?
0.030mol Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	0.24mol HCl	0.15mol H <sub>2</sub> O	0.15mol H₂O
3Cu+ 8HNO <sub>3</sub> □ 3Cu(NO <sub>3</sub> ) <sub>2</sub> + 2NO+ 4H <sub>2</sub> O How many grams of HNO <sub>3</sub> are needed to dissolve 11.45g of Cu?	2Al + Fe <sub>2</sub> O <sub>3</sub> □ Al <sub>2</sub> O <sub>3</sub> + 2Fe  Calculate the mass of iron that can be formed with 1.75 mol Fe <sub>2</sub> O <sub>3</sub>	How many molecules of water are produced when 8.92 liters of oxygen are reacted with excess hydrogen?	When 47.6 g of calcium chlorate decomposes into calcium chloride and oxygen, how many liters of oxygen are produced?
30.31g HNO <sub>3</sub>	195g Fe	4.79x10 <sup>23</sup> molecules H <sub>2</sub> O	15.5L O <sub>2</sub>
How many grams of aluminum chloride are produced when 11.82 grams of aluminum are reacted with excess chlorine gas?	Magnesium sulfate reacts with sodium chloride to produce magnesium chloride and sodium sulfate. How many grams of magnesium chloride are produced if 5.75 grams of sodium chloride is used?	How many grams of iron(III) sulfide are produced when 125 grams of iron react with sulfur?	How many molecules of Barium hydroxide are needed to produce 3.33 grams of water? Ba(OH) <sub>2</sub> + HNO <sub>3</sub> → H <sub>2</sub> O + Ba(NO <sub>3</sub> ) <sub>2</sub>
58.56g AICl <sub>3</sub>	4.68g MgCl <sub>2</sub>	233 g Fe <sub>2</sub> S <sub>3</sub>	5.56x10 <sup>22</sup> molecules Ba(OH) <sub>2</sub>