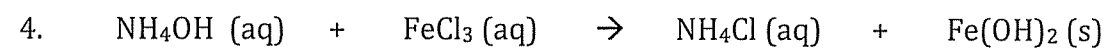
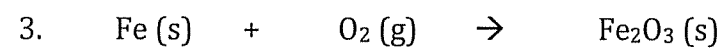
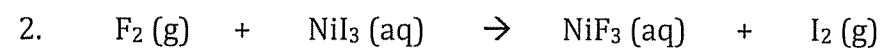


Mass Relationships in Chemical Reactions:

$2 \text{H}_2(\text{g})$	+	$\text{O}_2(\text{g})$	\rightarrow	$2 \text{H}_2\text{O}(\text{l})$
2 molecules		1 molecule		2 molecules
2 mol		1 mol		2 mol
$2 \text{ mol} \times (2.02 \text{ g/mol})$		$1 \text{ mol} \times (32.00 \text{ g/mol})$		$2 \text{ mol} \times (18.02 \text{ g/mol})$
4.04 g		32.00 g		36.04 g

Balance these equations: Mathematically show that the law of conservation of matter is upheld.



Mole Relationships in Chemical Reactions

1. In reaction #1, if 4 moles of Al react, how many moles of AlCl_3 will be formed?

If 1 mole of Al react, how many moles of AlCl_3 will be formed?

2. In reaction #2, if 1.5 moles of F_2 react, how many moles of NiF_3 will be formed?

If 4 moles of NiI_3 react, how many moles of I_2 will be formed?

3. In reaction #3, if 8 moles of Fe react, how many moles of oxygen reacted?

How many moles of Fe_2O_3 will be formed?

4. In reaction #4, if 6 moles of NH_4OH react, how many moles of FeCl_3 react?

How many moles of $\text{Fe}(\text{OH})_3$ will be formed?

In reaction #4, if 1.5 moles of NH_4OH react, how many moles of FeCl_3 react?

How many moles of $\text{Fe}(\text{OH})_3$ will be formed?

How many moles of NH_4Cl will be formed?