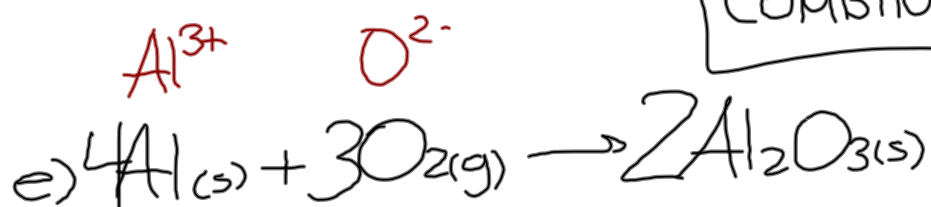
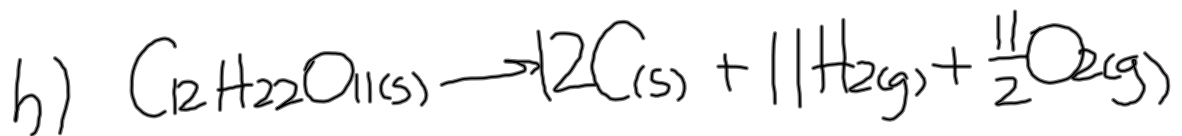


## Check Homework - Worksheet



aluminum + oxygen  $\rightarrow$  aluminum oxide

COMBINATION



sucrose  $\rightarrow$  carbon + hydrogen + oxygen

DECOMP.

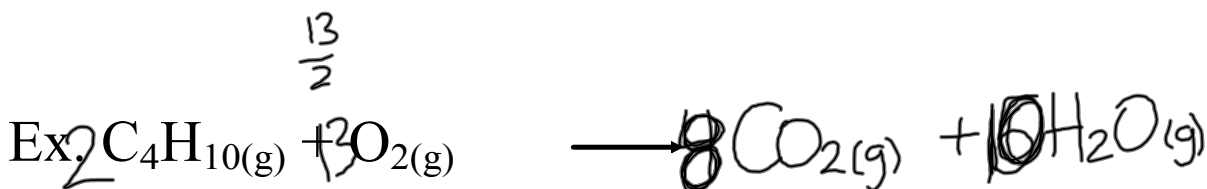
# Chemical Reactions

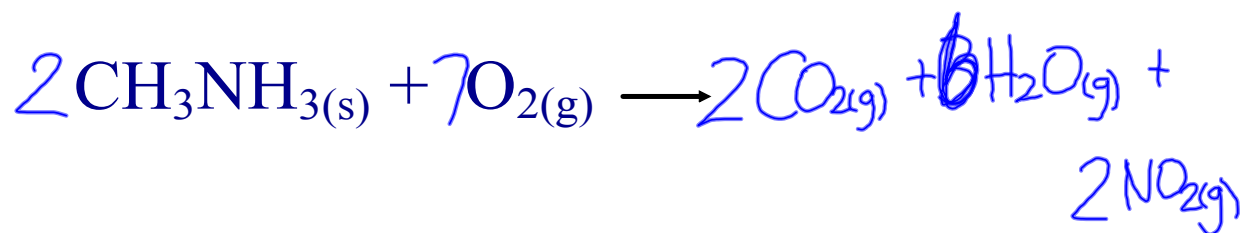
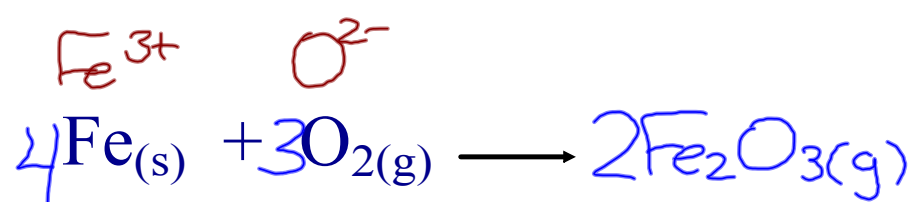
## III. Combustion Reaction

A complete combustion reaction is the <sup>+ O<sub>2(g)</sub></sup>burning of a substance with oxygen to produce the most common oxides of the elements in the substance being burned.

### Most Common Oxides:

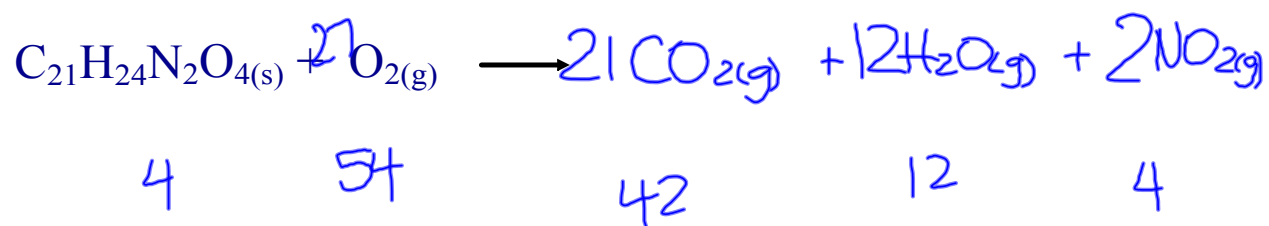
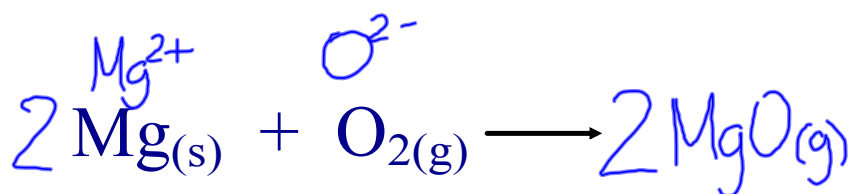
- Carbon : CO<sub>2(g)</sub>
- Hydrogen: H<sub>2</sub>O<sub>(g)</sub>
- Sulfur: SO<sub>2(g)</sub>
- Nitrogen: NO<sub>2(g)</sub>
- A metal: Oxide of metal with most common ion charge





## Combustion Reactions

Write a balanced chemical equation for the following combustion reactions:



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# Homework

**p. 331 #13, 14**

**p. 332 #15, 16**

**p. 337 #20, 21**

# Chemical Reactions

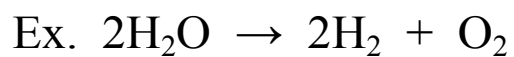
## I. Formation Reactions

elements            compound



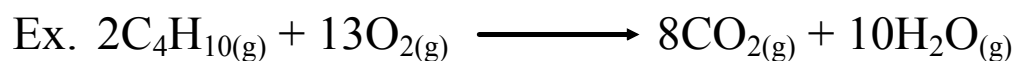
## II. Decomposition Reactions

compound        elements



## III. Combustion Reaction

substance + oxygen  $\longrightarrow$  most common oxides



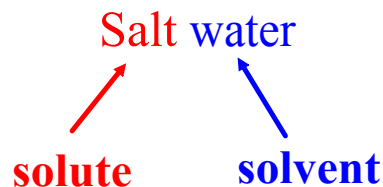
# Chemical Reactions in Solution

**Solution** - homogeneous (uniform) mixture of a solute and a solvent.

⇒ solute - substance dissolved

⇒ solvent - substance doing dissolving (liquid)

Ex.



If the amount of solute that can dissolve in a solvent is large, then the solute is said to have a *high solubility*.

If the amount of solute that can dissolve in a solvent is small, then the solute is said to have a *low solubility*.

Solid substances formed from reactions in solutions are known as **precipitates**.

## Solubility Rules

- Group 1 Compounds have a high solubility
- Compounds containing ammonium ( $\text{NH}_4^+$ ) have a high solubility
- All acids have a high solubility
- Elements have a low solubility (except chlorine)
- Solubility varies for molecular compounds