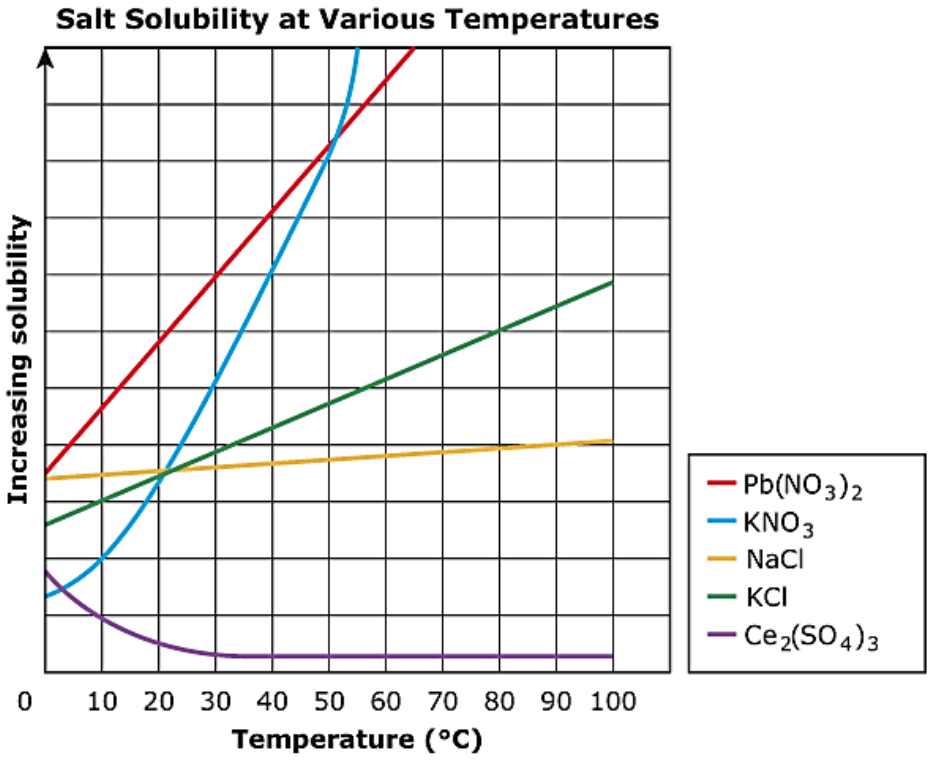
# GED Science 2014

When methane burns, it combines with oxygen to form carbon dioxide and water. This reaction releases energy. The balanced chemical equation representing this process is shown below:

$$CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$$

1. Which statement about this process is true?
    a. When one unit of methane is consumed, one unit of water is produced
    b. When one unit of oxygen is consumed, two units of water are produced
    c. When one unit of oxygen is consumed, two units of carbon dioxide are produced
    d. When one unit of methane is consumed, one unit of carbon dioxide is produced

A scientist collects data on the solubility of different salts and different temperatures. The results are shown in the graph.




2. Which conclusion is supported by the data in the graph?
    a. Solubility always increases as temperature increases
    b. At 40°C, KCl has the highest solubility of the salts in the table
    c. The rate of change in the solubility of $KNO_3$ changes as temperature increases
    d. The solubility of NaCl does not increase with increasing temperatures above 80°C

Answers: 1 – D, 2 – C