## Astronomy Ranking Task: Chemical Reactions

## Exercise #1

**Description:** The following are all unbalanced chemical reaction equations.

- A.  $CH_4 + O_2 \rightarrow CO_2 + H_2O$
- B.  $C_4H_{10} + O_2 \rightarrow CO_2 + H_2O$
- C.  $C_3H_8 + O_2 \rightarrow CO_2 + H_2O$
- D.  $C_8H_{18} + O_2 \rightarrow CO_2 + H_2O$

**A. Ranking instructions:** Rank the number of oxygen atoms on the left side of each unbalanced reaction.

Ranking Order: Most 1 \_\_\_\_\_ 2 \_\_\_\_ 3 \_\_\_\_ 4 \_\_\_\_ Least

Or, all of the unbalanced reactions have the same number of oxygen atoms on the left side. \_\_\_\_\_ (indicate with a check mark)

**Carefully explain** your reasoning for ranking this way:

**B.** Ranking instructions: Rank the number of oxygen atoms on the right side of each unbalanced reaction.

Ranking Order: Most 1 \_\_\_\_\_ 2 \_\_\_\_ 3 \_\_\_\_ 4 \_\_\_\_ Least

Or, all of the unbalanced reactions have the same number of oxygen atoms on the right side. \_\_\_\_\_ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

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