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:

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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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C. Ranking instructions: Rank the number of carbon 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 carbon atoms on the left side. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

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D. Ranking instructions: Rank the number of carbon 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 carbon atoms on the right side. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

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