**Instructions:** Answer all of the questions to the best of your ability.

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| Given the following equation answer the questions pertaining to **Scenario A**. |
| |  |  |  |  | | --- | --- | --- | --- | | 1. In **Scenario A**, what is the stoichiometric coefficient of water? | | | | | a. | 1 | c. | 3 | | **b.** | **2** | d. | 4 |  |  |  |  |  | | --- | --- | --- | --- | | 2. In **Scenario A**, which of the following species are diatomic? | | | | | **a.** | **Hydrogen** | c. | Water | | **b.** | **Oxygen** | d. | None of the above | |

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| 3. The following graphic is a depiction of… | | | |
| a. | A pool table | **c.** | **The Periodic Table** |
| b. | A bingo table | d. | A ping-pong table |

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| 4. How many mols of water are produced from 2 mols of O2? Show all work. |

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| 5. Which of the following is a *p*-orbital? | | | |
| **a.** |  | c. |  |
| b. |  | d. |  |