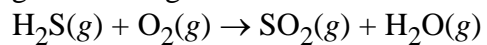


1. The equation $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$ means that 1 g of N_2 reacts with 3 g of H_2 to form 2 g of NH_3 .

[A] True

[B] False

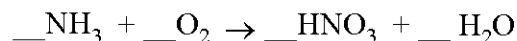
2. Balance the following equation for the reaction where hydrogen sulfide gas burns in oxygen gas to form gaseous water and sulfur dioxide gas.



1. Which equation shows a conservation of mass?

- (1) $\text{Na} + \text{Cl}_2 \rightarrow \text{NaCl}$ (3) $\text{H}_2\text{O} \rightarrow \text{H}_2 + \text{O}_2$
(2) $\text{Al} + \text{Br}_2 \rightarrow \text{AlBr}_3$ (4) $\text{PCl}_5 \rightarrow \text{PCl}_3 + \text{Cl}_2$

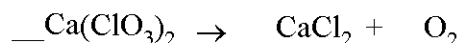
2. When the equation



is completely balanced using smallest whole numbers, the coefficient of O_2 would be

- (1) 1 (3) 3
(2) 2 (4) 4

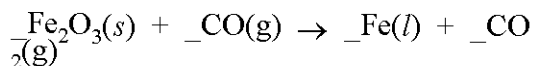
3. When the equation



is correctly balanced, the coefficient in front of the O_2 will be

- (1) 1 (3) 3
(2) 2 (4) 4

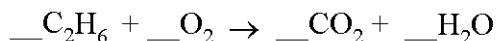
4. When the equation



is correctly balanced using the smallest whole numbers, the coefficient of $\text{Fe}(l)$ is

- (1) 1 (3) 3
(2) 2 (4) 4

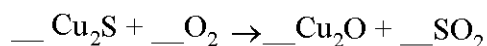
5. When the equation



is correctly balanced, the coefficient in front of O_2 will be

- (1) 7 (3) 3
(2) 10 (4) 4

6. When the equation

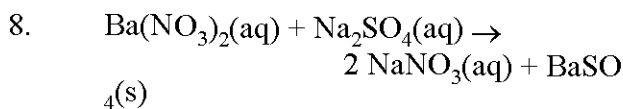


is completely balanced using smallest whole numbers the coefficient of the O_2 would be

- (1) 5 (3) 3
(2) 2 (4) 4

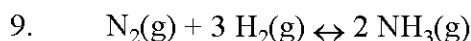
7. Which equation is correctly balanced?

- (1) $\text{CaO} + 2\text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2$
(2) $\text{NH}_3 + 2\text{O}_2 \rightarrow \text{HNO}_3 + \text{H}_2\text{O}$
(3) $\text{Ca}(\text{OH})_2 + 2\text{H}_3\text{PO}_4 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + 3\text{H}_2\text{O}$



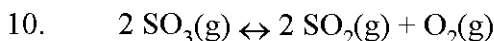
What type of reaction is shown above?

- (1) synthesis (3) single replacement
(2) decomposition (4) double replacement



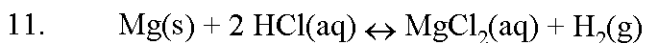
What type of reaction is shown above?

- (1) synthesis (3) single replacement
(2) decomposition (4) double replacement



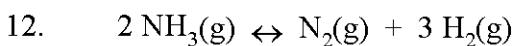
What type of reaction is shown above?

- (1) synthesis (3) single replacement
(2) decomposition (4) double replacement



What type of reaction is shown above?

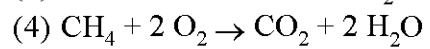
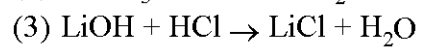
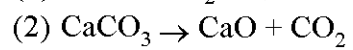
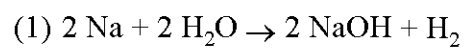
- (1) synthesis (3) single replacement
(2) decomposition (4) double replacement



What type of reaction is shown above?

- (1) synthesis (3) single replacement
(2) decomposition (4) double replacement

13. Which equation represents a double replacement reaction?



Answer Key

1. 4

2. 2

3. 3

4. 2

5. 1

6. 3

7. 2

8. 4

9. 1

10. 2

11. 3

12. 2

13. 3

Give the symbol (or symbols) that necessary to indicate each of the following in a chemical reaction:

16. solid

17. liquid

18. gas

19. dissolved in water

20. "yields" (makes)

21. "yields in a reversible reaction"

22. "substance "X" is used as a catalyst when A yields B and C

23. List the diatomic elements:

24. In number 22, indicate the reactant(s) and the product(s)