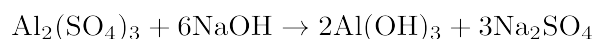


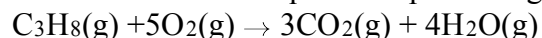
1. Given the balanced equation representing a reaction:



The mole ratio of NaOH to Al(OH)₃ is

- A) 1:1 B) 1:3 C) 3:1 D) 3:7

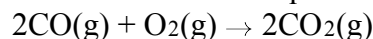
2. Given the balanced equation representing a reaction:



What is the total number of moles of O₂(g) required for the complete combustion of 1.5 moles of C₃H₈(g)?

- A) .30 mol B) 1.5 mol
C) 4.5 mol D) 7.5 mol

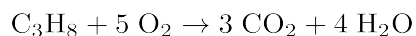
3. Given the balanced equation representing a reaction:



What is the mole ratio of CO(g) to CO₂(g) in this reaction?

- A) 1:1 B) 1:2 C) 2:1 D) 3:2

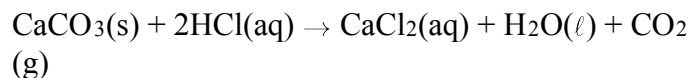
4. Given the balanced equation representing the reaction between propane and oxygen:



According to this equation, which ratio of oxygen to propane is correct?

- A) $\frac{5 \text{ grams O}_2}{1 \text{ gram C}_3\text{H}_8}$
B) $\frac{5 \text{ moles O}_2}{1 \text{ mole C}_3\text{H}_8}$
C) $\frac{10 \text{ grams O}_2}{11 \text{ grams C}_3\text{H}_8}$
D) $\frac{10 \text{ moles O}_2}{11 \text{ moles C}_3\text{H}_8}$

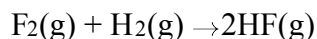
5. Given the balanced equation:



What is the total number of moles of CO₂ formed when 20. moles of HCl is completely consumed?

- A) 5.0 mol B) 10. mol
C) 20. mol D) 40. mol

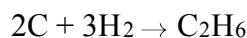
6. Given the balanced equation representing a reaction:



What is the mole ratio of H₂(g) to HF(g) in this reaction?

- A) 1:1 B) 1:2 C) 2:1 D) 2:3

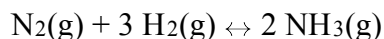
7. Given the balanced equation:



What is the total number of moles of C that must completely react to produce 2.0 moles of C₂H₆?

- A) 1.0 mol B) 2.0 mol
C) 3.0 mol D) 4.0 mol

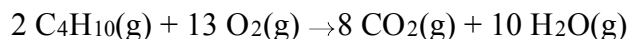
8. Given the reaction:



What is the mole-to-mole ratio between nitrogen gas and hydrogen gas?

- A) 1:2 B) 1:3 C) 2:2 D) 2:3

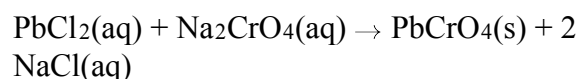
9. Given the balanced equation:



What is the total number of moles of O₂(g) that must react completely with 5.00 moles of C₄H₁₀(g)?

- A) 10.0 B) 20.0 C) 26.5 D) 32.5

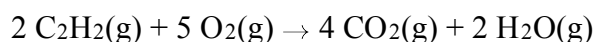
10. Given the reaction:



What is the total number of moles of NaCl formed when 2 moles of Na₂CrO₄ react completely?

- A) 1 mole B) 2 moles
C) 3 moles D) 4 moles

11. Given the equation:



How many moles of oxygen are required to react completely with 1.0 mole of C₂H₂?

- A) 2.5 B) 2.0 C) 5.0 D) 10

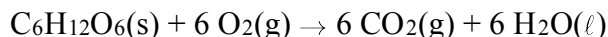
12. Given the reaction:



What is the total number of moles of water needed to make 2.5 moles of $\text{C}_6\text{H}_{12}\text{O}_6$?

- A) 2.5 B) 6.0 C) 12 D) 15

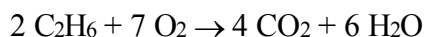
13. Given the reaction:



How many moles of $\text{C}_6\text{H}_{12}\text{O}_6(\text{s})$ are needed to produce 24 moles of carbon dioxide?

- A) 1.0 moles B) 12 moles
C) 24 moles D) 4.0 moles

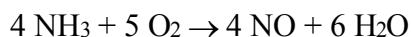
14. Given the reaction:



What is the total number of moles of CO_2 produced when one mole of C_2H_6 is completely reacted?

- A) 1 B) 2 C) 3 D) 4

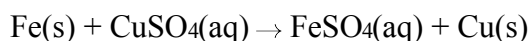
15. Given the reaction:



What is the total number of moles of NO produced when 1.0 mole of O_2 is completely consumed?

- A) 1.0 mole B) 1.2 moles
C) 0.80 mole D) 4.0 moles

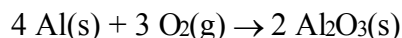
16. Given the balanced equation:



What total mass of iron is necessary to produce 1.00 mole of copper?

- A) 26.0 g B) 55.8 g
C) 112 g D) 192 g

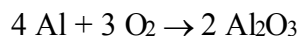
17. Given the reaction:



What is the minimum number of grams of oxygen gas required to produce 1.00 mole of aluminum oxide?

- A) 32.0 g B) 48.0 g
C) 96.0 g D) 192 g

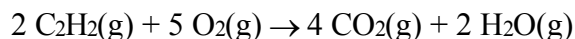
18. Given the reaction:



What is the total number of moles of aluminum oxide that can be formed when 54 grams of aluminum reacts completely with oxygen?

- A) 1.0 mole B) 2.0 moles
C) 3.0 moles D) 4.0 moles

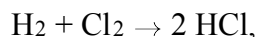
19. Given the reaction:



What is the total number of grams of $\text{O}_2(\text{g})$ needed to react completely with 0.50 mole of $\text{C}_2\text{H}_2(\text{g})$?

- A) 10. g B) 40. g
C) 80. g D) 160 g

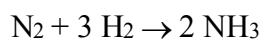
20. According to the reaction



the production of 2.0 moles of HCl would require 71. grams of Cl_2 and

- A) 1.0 g of H_2 B) 2.0 g of H_2
C) 3.0 g of H_2 D) 4.0 g of H_2

21. Given the reaction:



How many grams of ammonia are produced when 1.0 mole of nitrogen reacts?

- A) 8.5 B) 17 C) 34 D) 68

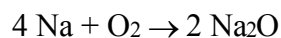
22. Given the reaction:



How many moles of Al_2O_3 will be formed when 27 grams of Al reacts completely with O_2 ?

- A) 1.0 B) 2.0 C) 0.50 D) 4.0

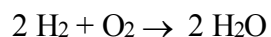
23. Given the reaction:



How many grams of oxygen are completely consumed in the production of 1.00 mole of Na_2O ?

- A) 16.0 B) 32.0 C) 62.0 D) 124

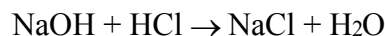
24. Given the reaction:



The total number of grams of O_2 needed to produce 54 grams of water is

- A) 36 B) 48 C) 61 D) 75

25. Given the balanced equation:



What is the total number of grams of H_2O produced when 116 grams of the product, NaCl , is formed?

- A) 9.0 g B) 18 g C) 36 g D) 54 g

26. Given the reaction:



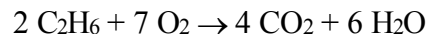
What is the total mass of H_2O produced when 32 grams of Cu is completely consumed?

- A) 9.0 g B) 18 g C) 36 g D) 72 g

27. If 6.02×10^{23} molecules of N_2 react according to the equation $\text{N}_2 + 3 \text{H}_2 \rightarrow 2 \text{NH}_3$, the total number of molecules of NH_3 produced is

- A) 1.00 B) 2.00
C) 6.02×10^{23} D) 12.0×10^{23}

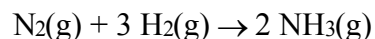
28. Given the reaction:



What is the total number of CO_2 molecules produced when one mole of C_2H_6 is consumed?

- A) 6.02×10^{23} B) $2(6.02 \times 10^{23})$
C) $3(6.02 \times 10^{23})$ D) $4(6.02 \times 10^{23})$

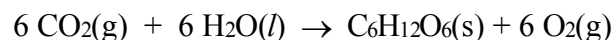
29. Given the reaction



How many liters of ammonia, measured at STP, are produced when 28.0 grams of nitrogen is completely consumed?

- A) 5.60 B) 11.2 C) 22.4 D) 44.8

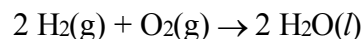
30. Given the equation:



What is the minimum number of liters of $\text{CO}_2(\text{g})$, measured at STP, needed to produce 32.0 grams of oxygen?

- A) 264 L B) 32.0 L
C) 192 L D) 22.4 L

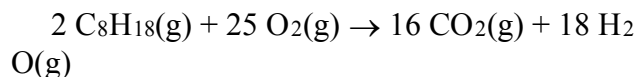
31. Given the reaction:



What is the total number of liters of $\text{O}_2(\text{g})$ at STP needed to produce 6.0×10^{23} molecules of $\text{H}_2\text{O}(\text{l})$?

- A) 11.2 L B) 22.4 L
C) 33.6 L D) 44.8 L

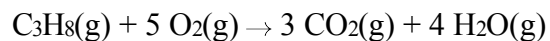
32. Given the reaction:



What volume of $\text{C}_8\text{H}_{18}(\text{g})$ will completely react to produce exactly 36 liters of $\text{H}_2\text{O}(\text{g})$?

- A) 27 L B) 2.0 L C) 36 L D) 4.0 L

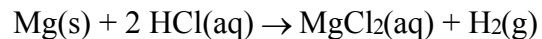
33. Given the balanced equation:



What is the total number of liters of $\text{CO}_2(\text{g})$ produced when 20.0 liters of $\text{O}_2(\text{g})$ are completely consumed?

- A) 12.0 L B) 22.4 L
C) 3.00 L D) 5.00 L

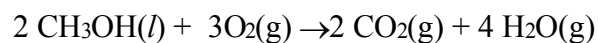
34. Given the balanced equation:



At STP, what is the total number of liters of hydrogen gas produced when 3.00 moles of hydrochloric acid solution is completely consumed?

- A) 11.2 L B) 22.4 L
C) 33.6 L D) 44.8 L

35. Given the reaction:



How many liters of $\text{O}_2(\text{g})$ are needed to produce exactly 200 liters of $\text{CO}_2(\text{g})$?

- A) 100 L B) 200 L
C) 300 L D) 400 L
-