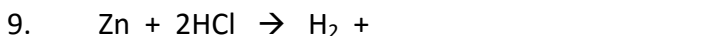
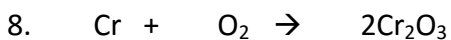
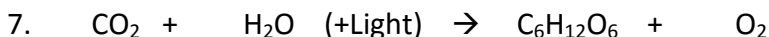
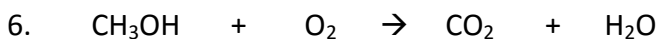
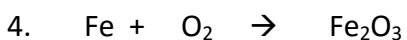
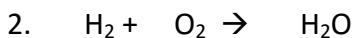


Unit 3 Review

1. State the law of Conservation of Mass.

Balance the following chemical equations:



10. Identify the names and numbers of the atoms on the Reactants side of the following equations: $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$

11. Identify the names and numbers of the atoms on the Products sides of the following equations: $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$

Classify the following as Physical Changes or Chemical Changes:

12. Cutting hair

13. Melting butter

14. Shredding cheese

15. Souring milk

16. Toasting bread

17. Melting wax

18. Frying an egg

19. Rusting metal

20. Briefly define endothermic reaction.

21. Briefly define exothermic reaction.

22. List examples of evidence of a chemical reaction:

23. Identify the parts of a chemical equation.
24. Define chemical change.
25. Define physical change.

Identify the names of each element in the following formulas, and the number of atoms of each element:

26. $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$
27. C_3H_8
28. C_2H_6
29. $18\text{Al}(\text{OH})_3$
30. $5\text{Cr}(\text{CO}_3)_2$
31. $6\text{Ca}(\text{NO}_3)_2$
32. $6\text{Al}(\text{OH})_3$
33. $\text{C}_6\text{H}_{12}\text{O}_6$
34. $\text{C}_9\text{H}_8\text{O}_4$
35. $\text{Al}(\text{OH})_3$
36. SHCO_3
37. NaHCO_3
38. NaHCO_3
39. $\text{NaH}(\text{CO})_3$
40. $2\text{CH}_2\text{O}$
41. $\text{C}_2\text{H}_4\text{O}_2$
42. $\text{C}_2\text{H}_2\text{O}_4$
43. $2\text{C}_2\text{H}_4\text{O}$

Boiling Points of Some Compounds

Chemical Formula	Boiling Point (°C)	Temperature Increase (°C)
CH_4	-162	—
C_2H_6	-89	73
C_3H_8	-42	47
C_4H_{10}	-1	41
C_5H_{12}	36	37
C_6H_{14}	69	33

44. Based on the data in the table, a reasonable estimate of the boiling point of the next compound (C_7H_{16}) is _____?