

Chapter 14 HW Answers

Review Questions:

9. The atomic make-up of the substance does not change during a physical change.
19. An element represents a single type of atom, while a compound is a chemical bond and includes more than one type of atom.

20. **8 atoms**

3 Hydrogen
1 Phosphorous
4 Oxygen

23. Potassium Fluoride

24. TiO_2

Exercises:

8. This is a physical change. The alcohol evaporated, it did not combine with the table top to form a new substance.

26.

- Physical property – no new substance
- Chemical property – color change
- Physical property – change in shape and size

27.

- Physical property – the mixture is separating
- Chemical property – color change
- Chemical property – color change

37. H_2S

38. tribarium dinitride

Additional:

1.

- A new substance is formed (mold) and there is a color change
- Production of a gas
- A new substance is formed and there is a color change
- A new substance is formed and there is a color change
- Energy is released

2.

- | | |
|-------------------|----------------|
| a. water | compound |
| b. carbon dioxide | compound |
| c. iron | element |
| d. ozone | molecule |
| e. helium | element |
| f. salt | compound |

3.

- nitrogen trifluoride
- nitrogen dioxide
- dinitrogen oxide
- dinitrogen tetroxide
- phosphorous trichloride
- sulfur hexachloride
- diphosphorous pentaoxide
- potassium nitrate
- dihydrogen sulfate (actually this one has a special traditional name – sulfuric acid)