Classify each of the following as an element, compound, solution or heterogeneous mixture.

1. Table Salt
2. Apple
3. Plutonium
4. Water
5. Calcium
6. Raisin Bran
7. Gasoline
8. Calcium Bromide
9. Iced Tea (no ice)
10. Silver
11. Chocolate Chip Cookie
12. Carbon Dioxide
13. Kool-Aid
14. Mud
15. Vegetable Soup
16. Pure Air
17. Bronze
18. Neon
19. Ammonium Nitrate
20. Spaghetti and meatballs
21. Ethanol (ethyl alcohol) and water will form a solution. Both are liquids at room temperature. How is it determined which one is the solvent?
22. Sugar is dissolved in a cup of hot coffee. Is the sugar a solute or solvent? How do you know?
23. State a difference between a compound and a solution.
24. State a difference between a compound and an element.
25. State a difference between a solution and a heterogeneous mixture.

Classify each of the materials below. In the center column, state whether the material is a **pure substance** or a **mixture**. If the material is a pure substance, further classify it as either an **element** or **compound** in the right column. Similarly, if the material is a mixture, further classify it as **homogeneous** or **heterogeneous** in the right column. Write the entire word in each space to earn full credit.

|  |  |  |
| --- | --- | --- |
| Material | Pure Substance ***or Mixture*** | ***Element, Compound,***  ***Homogeneous, Heterogeneous*** |
| concrete |  |  |
| sugar + pure water  (C12H22O11 + H2O) |  |  |
| iron filings (Fe) |  |  |
| limestone (CaCO3) |  |  |
| orange juice (w/pulp) |  |  |
| Pacific Ocean |  |  |
| air inside a balloon |  |  |
| aluminum (Al) |  |  |
| magnesium (Mg) |  |  |
| acetylene (C2H2) |  |  |
| tap water in a glass |  |  |
| soil |  |  |
| pure water (H2O) |  |  |
| chromium (Cr) |  |  |
| Chex mix |  |  |
| salt + pure water  (NaCl + H2O) |  |  |
| benzene (C6H6) |  |  |
| muddy water |  |  |
| brass  (Cu mixed with Zn) |  |  |
| baking soda (NaHCO3) |  |  |