1. Classify each of the following as elements (E), compounds (C) or Mixtures (M). Write the letter X if it is none of these.

|  |  |  |
| --- | --- | --- |
| \_\_Diamond (Carbon) \_\_Sugar (C6H12O6) \_\_Milk\_\_Air \_\_Sulfuric Acid (H2SO4)\_\_Gasoline \_\_Krypton (K) \_\_Bismuth (Bi) \_\_Uranium (U) | \_\_Water (H2O) \_\_Alcohol (CH3OH)\_\_Pail of Garbage\_Ammonia (NH3) \_\_Salt (NaCl)\_\_Energy \_\_Wood \_\_Bronze \_\_Ink  | \_\_Dry Ice (CO2) \_\_Baking Soda (NaHCO3) \_\_Titanium (Ti)\_\_Iron (Fe)\_\_Popcorn\_\_Gold (Au) \_\_Electricity \_\_A dog \_\_Concrete  |

1. Match each diagram with its correct description. Diagrams will be used once.

 **A B C D E**

\_\_ Pure Element – only one type of atom present.

\_\_ Mixture of two elements – two types of uncombined atoms present.

\_\_ Pure compound – only one type of compound present.

\_\_ Mixture of two compounds – two types of compounds present.

\_\_ Mixture of a compound and an element.

1. Read each description and determine whether it is a pure substance or mixture. Then further classify the matter (element, compound, homogeneous mixture, heterogeneous mixture)

|  |  |  |
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| **Description** | **Pure Substance****or Mixture?** | **Classification?** |
| 1. Chocolate syrup is added to milk and stirred |  |  |
| 2. Copper metal (used to make wires) |  |  |
| 3. Sand is added to water |  |  |
| 4. Distilled water |  |  |
| 5. Tap water |  |  |
| 6. Diamond |  |  |
| 7. Table sugar |  |  |
| 8. Table sugar added to a cup of coffee and stirred |  |  |
| 9. Kool-aid is added to water |  |  |
| 10. Coca-cola |  |  |
| 11. Helium gas (used to inflate a balloon) |  |  |
| 12. Mercury metal (used in old thermometers) |  |  |
| 13. Hydrogen gas (an explosive gas) |  |  |
| 14. Trail mix (peanuts, pretzels and m&m's) |  |  |
| 15. The air webreathe |  |  |