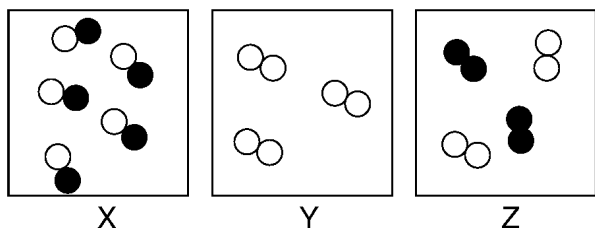


## Do Now Unit 2 Matter & Naming

1. A sample is prepared by completely dissolving 10.0 grams of NaCl in 1.0 liter of H<sub>2</sub>O. Which classification best describes this sample?

- A) homogeneous compound
- B) homogeneous mixture
- C) heterogeneous compound
- D) heterogeneous mixture

2. Given the diagrams X, Y, and Z below:



Key
Atom of element A = ○
Atom of element B = ●

Which diagram or diagrams represent a mixture of elements A and B?

- A) X, only
- B) Z, only
- C) X and Y
- D) X and Z

3. One similarity between all mixtures and compounds is that both

- A) are heterogeneous
- B) are homogeneous
- C) combine in a definite ratio
- D) consist of two or more substances

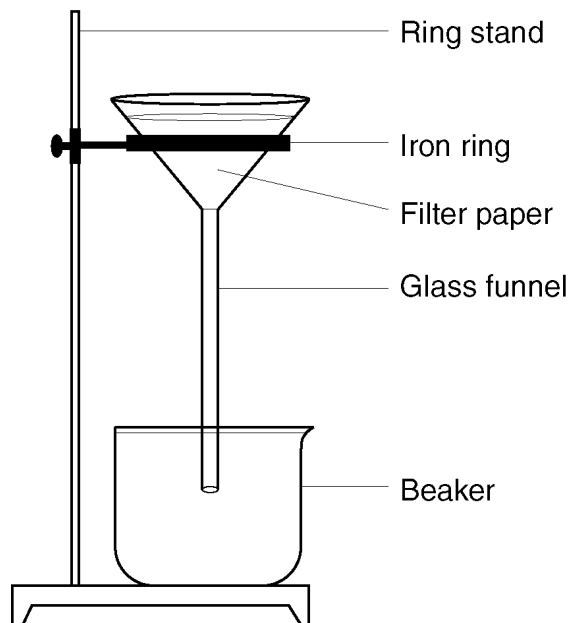
4. Which is a homogeneous mixture?

- A) I<sub>2</sub>(s)
- B) I<sub>2</sub>(ℓ)
- C) HCl(g)
- D) HCl(aq)

5. An example of a heterogeneous mixture is

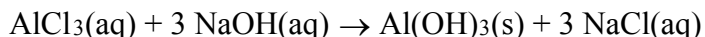
- A) soil
- B) sugar
- C) carbon monoxide
- D) carbon dioxide

6. Which mixture can be separated by using the equipment shown below?



- A) NaCl(aq) and SiO<sub>2</sub>(s)
- B) NaCl(aq) and C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>(aq)
- C) CO<sub>2</sub>(aq) and NaCl(aq)
- D) CO<sub>2</sub>(aq) and C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>(aq)

7. A student observed the following reaction:



After the products were filtered, which substance remained on the filter paper?

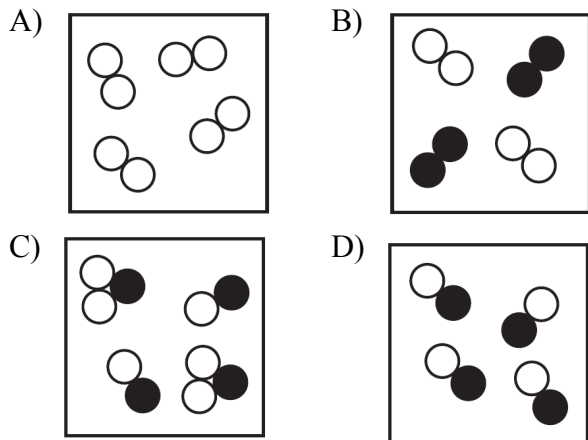
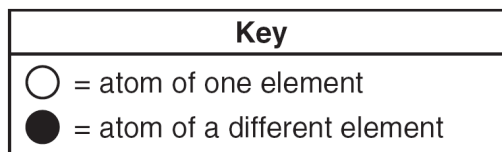
- A) NaCl
- B) NaOH
- C) AlCl<sub>3</sub>
- D) Al(OH)<sub>3</sub>

8. Recovering the salt from a mixture of salt and water could best be accomplished by

- A) evaporation
- B) filtration
- C) paper chromatography
- D) density determination

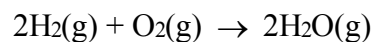
## Do Now Unit 2 Matter & Naming

9. A bottle of rubbing alcohol contains both 2-propanol and water. These liquids can be separated by the process of distillation because the 2-propanol and water
- have combined chemically and retain their different boiling points
  - have combined chemically and have the same boiling point
  - have combined physically and retain their different boiling points
  - have combined physically and have the same boiling point
10. Matter that is composed of two or more different elements chemically combined in a fixed proportion is classified as
- a compound
  - an isotope
  - a mixture
  - a solution
11. Which particle diagram represents a sample of one compound, only?



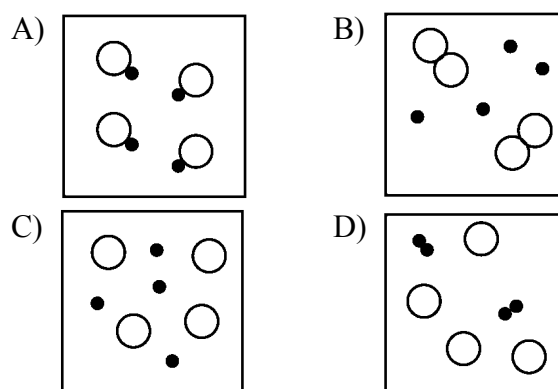
12. Two substances, *A* and *Z*, are to be identified. Substance *A* can *not* be broken down by a chemical change. Substance *Z* can be broken down by a chemical change. What can be concluded about these substances?
- Both substances are elements.
  - Both substances are compounds.
  - Substance *A* is an element and substance *Z* is a compound.
  - Substance *A* is a compound and substance *Z* is an element.

13. Consider the following reaction:



What kind of change do the reactants undergo in the reaction?

- atomic change
  - phase change
  - chemical change
  - nuclear change
14. Which substance can be decomposed by a chemical change?
- Co
  - CO
  - Cr
  - Cu
15. Which particle diagram represents one pure substance, only?



16. Which two substances can *not* be broken down by chemical change?

- C and CuO
- C and Cu
- CO<sub>2</sub> and CuO
- CO<sub>2</sub> and Cu

17. Which species represents a chemical compound?

- N<sub>2</sub>
- NH<sub>4</sub><sup>+</sup>
- Na
- NaHCO<sub>3</sub>

18. The list below shows four samples: *A*, *B*, *C*, and *D*.

- HCl(aq)
- NaCl(aq)
- HCl(g)
- NaCl(s)

Which samples are mixtures?

- A* and *B*
- A* and *C*
- C* and *B*
- C* and *D*

19. Which pair are classified as chemical substances?

- mixtures and solutions
- compounds and solutions
- elements and mixtures
- compounds and elements

## Do Now Unit 2 Matter & Naming

20. Bronze contains 90 to 95 percent copper and 5 to 10 percent tin. Because these percentages can vary, bronze is classified as
- A) a compound                      B) an element  
C) a mixture                        D) a substance
21. A mixture of crystals of salt and sugar is added to water and stirred until all solids have dissolved. Which statement best describes the resulting mixture?
- A) The mixture is homogeneous and can be separated by filtration.  
B) The mixture is homogeneous and cannot be separated by filtration.  
C) The mixture is heterogeneous and can be separated by filtration.  
D) The mixture is heterogeneous and cannot be separated by filtration.
22. Compared to the physical and chemical properties of the compound  $\text{NO}_2$ , the compound  $\text{N}_2\text{O}$  has
- A) different physical properties and different chemical properties  
B) different physical properties and the same chemical properties  
C) the same physical properties and different chemical properties  
D) the same physical properties and the same chemical properties
23. Which formula represents strontium phosphate?
- A)  $\text{SrPO}_4$                               B)  $\text{Sr}_3\text{PO}_8$   
C)  $\text{Sr}_2(\text{PO}_4)_3$                       D)  $\text{Sr}_3(\text{PO}_4)_2$
24. What is the chemical formula for iron(III) oxide?
- A)  $\text{FeO}$                                  B)  $\text{Fe}_2\text{O}_3$   
C)  $\text{Fe}_3\text{O}$                               D)  $\text{Fe}_3\text{O}_2$
25. What is the chemical formula of iron(III) sulfide?
- A)  $\text{FeS}$                                  B)  $\text{Fe}_2\text{S}_3$   
C)  $\text{FeSO}_3$                             D)  $\text{Fe}_2(\text{SO}_3)_3$
26. What is the name of the polyatomic ion in the compound  $\text{Na}_2\text{O}_2$ ?
- A) hydroxide                         B) oxalate  
C) oxide                                D) peroxide
27. Which formula represents lead(II) chromate?
- A)  $\text{PbCrO}_4$                             B)  $\text{Pb}(\text{CrO}_4)_2$   
C)  $\text{Pb}_2\text{CrO}_4$                          D)  $\text{Pb}_2(\text{CrO}_4)_3$
28. What is the correct formula for iron (II) bromide?
- A)  $\text{FeBr}_2$                               B)  $\text{Fe}_2\text{Br}$   
C)  $\text{FeBrO}_2$                          D)  $\text{Fe}_2\text{BrO}_2$
29. Atoms of which set of elements all exhibit the same oxidation state?
- A) H, He, Li                            B) He, F, C  
C) Be, Ca, Sr                         D) B, Si, As
30. Which formula contains only two elements?
- A)  $\text{KOH}$                                  B)  $\text{NaClO}_3$   
C)  $\text{Al}_2\text{S}_3$                                 D)  $\text{Bi}(\text{NO}_3)_3$
-