

Name: _____ Date: _____

Practice Test 1

- _____ 1. An example of a mixture is A) hydrogen fluoride B) purified water C) gold D) the air in this room E) all of these
- _____ 2. Which of the following is an incorrect description? A) A homogeneous mixture. B) A heterogeneous compound. C) A solid element. D) A mixture of solids. E) A solution of gases.
- _____ 3. A homogeneous mixture is also called _____. A) a heterogeneous mixture. B) a pure substance. C) a compound. D) a solution. E) an element.
- _____ 4. A solution can be distinguished from a compound by its A) variable composition B) liquid state C) heterogeneous nature D) lack of color
- _____ 5. Which is an example of a homogeneous mixture? A) vodka B) oily water C) soil (dust) D) sodium chloride E) aluminum
- _____ 6. The process of filtering a sand-saltwater mixture is a _____ process.
- _____ 7. Which of the following is a homogeneous mixture? A) pure water B) gasoline C) jar of jelly beans D) soil E) copper metal
- _____ 8. How many millimeters are in 3.07×10^2 centimeters? A) 3.07×10^2 mm B) 3.07×10^1 mm C) 3.07×10^3 mm D) 3.07 mm E) 3.07×10^{-2} mm
- _____ 9. 7.4 milliseconds is equal to how many seconds? A) 7.4×10^3 s B) 7.4×10^2 s C) 7.4×10^{-3} s D) 7.4×10^{-2} s E) 0.74 s
- _____ 10. Which of the following is an SI unit for expressing the mass of a block of Au? A) m B) g C) L D) pound
- _____ 11. The number of cubic centimeters (cm^3) in 38.3 mL is A) 0.0383 cm^3 B) 3.83 cm^3 C) 38.3 cm^3 D) none of these
- _____ 12. Using the rules of significant figures, calculate the following:
 $6.167 + 70 =$
A) 76
B) 80
C) 76.167
D) 77
E) 76.17
- _____ 13. The number 14.809 rounded to three significant figures is A) 15.0 B) 14.9 C) 14.81 D) 14.809 E) 14.8

- _____ 14. How many significant figures are in the number 4.00700×10^{13} ? A) 2 B) 4 C) 5 D) 6
E) none of these
- _____ 15. How many significant figures are in the number 0.0040090? A) 8 B) 7 C) 6 D) 5 E) 4
- _____ 16. Write the number 0.0005034 in scientific notation. A) 5.034×10^4 B) 0.5034×10^{-3} C)
 5.034×10^{-4} D) 50.34×10^{-5} E) none of these
- _____ 17. Convert: 0.00455 cm = _____ mm. A) 4.55 mm B) 4.55×10^{-2} mm C) 0.455 mm
D) 4.55×10^{-4} mm E) 4.55×10^{-5} mm
18. Cesium melts at 302 K and boils at 944 K. What would be the physical state of cesium at 25°C?
- _____ 19. An experiment requires 40.1 g of ethyl alcohol (density = 0.790 g/mL). What volume, in liters,
will be required? A) 3.17×10^{-2} L B) 1.97×10^{-5} L C) 5.08e4 L D) 5.08×10^{-2} L E)
31.7 L
- _____ 20. If a 100.-g sample of a metal has a volume of 9.67 mL, what is the density of the metal? A)
10.3 g/mL B) 1.03 g/mL C) 0.0967 g/mL D) 10 g/mL E) none of these
- _____ 21. A runner jogs 4.1 miles every morning. How many kilometers does this represent? A) 2.5 km
B) 6.6 km C) 49. km D) 0.39 km E) 2.5 km
- _____ 22. A walker travels a distance of 1.2 miles. How many inches did the walker travel?
(1 mi = 5280. ft)
(1 ft = 12 in)
A) 6.3×10^3 in
B) 5.3×10^2 in
C) 14. in
D) 10.0 in
E) 7.6×10^4 in
- _____ 23. The state of matter for an object that has a definite volume but not a definite shape is A) solid
B) liquid C) gaseous D) elemental E) mixed
24. Anything that has mass and volume is called _____.
- _____ 25. Which of the following is a physical change? A) burning gasoline B) cooking an egg C)
decomposing meat D) evaporating water E) rusting iron
- _____ 26. Which of these is a chemical property? A) Ice melts at 0°C. B) Oxygen is a gas. C) Helium
is very nonreactive. D) Sodium is a soft, shiny metal. E) Water has a high specific heat.
- _____ 27. An example of a chemical change is A) boiling alcohol B) grinding coffee beans. C)
digesting a pizza D) coffee spilled on a shirt E) an ice cube melting in a drink

- _____ 28. In a chemical change, A) a phase change must occur B) the original material can never be regenerated C) a phase change never occurs D) the products are different substances from the starting materials
29. If iodine melts at 114°C and boils at 184°C, what is its physical state at 98°C?
- _____ 30. Which of the following is a chemical change? A) water boiling B) gasoline evaporating C) butter melting D) sugar dissolving in water E) paper burning
- _____ 31. How many of the following are pure compounds? sodium, sugar, oxygen, air, iron A) 1 B) 2 C) 3 D) 4 E) 5
- T F 32. True or false? A compound can consist of one kind of element.
- _____ 33. Which of these is an element? A) water B) iron ore C) wood D) silver E) brass
- _____ 34. An example of a pure substance is A) elements B) compounds C) pure water D) carbon dioxide E) all of these
35. Classify each of the following as an element (A), a compound (B), a homogeneous mixture (C), or a heterogeneous mixture (D).
- | | |
|------------------|-------|
| a. table salt | _____ |
| b. chlorine gas | _____ |
| c. sand in water | _____ |
| d. petroleum | _____ |
| e. caffeine | _____ |
- _____ 36. Which of the following is a homogeneous mixture? A) pure water B) gasoline C) jar of jelly beans D) soil E) copper metal
- T F 37. A solid substance is not considered matter.
- T F 38. True or False? The normal boiling point of water is 100°C, which is a physical property of the substance water.
- T F 39. True or False? Gold is a relatively soft metal, which is a chemical property of the substance gold.
- _____ 40. A _____ change involves a change in one or more physical properties, but no change in the fundamental components that make up the substance. A) chemical B) physical C) mixed D) potential E) kinetic
- T F 41. True or False? Metal rusting is an example of a chemical change.
- T F 42. True or False? Juice freezing into a popsicle is an example of a physical change.

Answer Key - Practice Test 1

1. D
2. B
3. D
4. A
5. A
6. physical
7. B
8. C
9. C
10. B
11. C
12. B
13. E
14. D
15. D
16. C
17. B
18. solid
19. D
20. A
21. B
22. E
23. B
24. matter
25. D
26. C
27. C
28. D
29. solid
30. E
31. A
32. False
33. D
34. E
35. a. C
b. A
c. D
d. C
e. B
36. B
37. False
38. True
39. False
40. B
41. True
42. True