

AP Chemistry Summer Assignment #2

1. Manganese makes up 0.00013% by weight of the elements found in a normal body. How many grams of manganese would be found in the body of a person weighing 183 lbs?
2. The melting point of uranium hexafluoride is 64.5 Celsius. What is the melting point of uranium hexafluoride on the Fahrenheit scale?
3. 8.4 milliseconds is equal to how many seconds?
4. Nitrogen boils at -320 Fahrenheit. What is this on the Celsius scale?
5. A sample of uranium weighing 30.923 g was dropped in a graduated cylinder containing 22.30 mL of water. The volume of the water plus the sample was 23.90 mL. What is the density of uranium?
6. How is the number 1250.37986 written to four significant figures?
7. Which of the following is the smallest mass?
 - a. 0.001219 g
 - b. 0.0165 mg
 - c. 923.1 micrograms
 - d. 39000 cg
8. The density of gasoline is 0.7025 g/mL. What is the mass of one gallon of gasoline in grams?
9. Which of these samples has the smallest mass?
 - a. 160 micrograms
 - b. 0.016 g
 - c. 0.00016 mg
 - d. 0.0016 mg
10. 1.0 g of an element was isolated from 660 kg of the ore molybdenite. The percent by mass of this element in the ore was?
11. Liquid hydrogen boils at -252.87 Celsius. What is this in Kelvin?
12. How many significant figures are there in the number 0.0322?
13. Express the number 0.000302 in scientific notation.
14. How many cubic meters equal one cubic millimeter?
15. How many cubic inches are equal to one liter?
16. How many inches equal 6.02 cm?
17. What is the number of square decimeters in 6.82 square centimeters?
18. Express the length 3.22 mm in centimeters.
19. How many liters equal 10.0 gallons of gasoline?

20. A sample of metal has a mass of 27.24 g and a volume of 2.2 mL. What is the correct value of its density using these data?

21. A 20.0 mL sample of glycerol has a mass of 25.2 grams. What is the mass of a 53 mL sample of glycerol?

22. What is the density of glycerol in ounces/quart?

23. A freighter carrying a cargo of uranium hexafluoride sank. The cargo of the uranium hexafluoride weighed 225000000 kg and was contained in 30 drums, each having a volume of 1620000 L. What is the density of uranium hexafluoride in g/mL?

24. The speed of light is 299800000 m/sec. What is the speed of light in furlongs per fortnight?