

Science 10
Chemistry Review

The questions below will be helpful for your test. Please read through the question carefully and answer in full sentences.

1. Write the definitions for the following terms.
 - a. Matter
 - b. Physical Property
 - c. Qualitative
 - d. Quantitative
 - e. Luster
 - f. Hardness
 - g. Malleability
 - h. Ductility
 - i. Solubility
 - j. Density
 - k. Viscosity
 - l. Chemical Property
 - m. Corrosion
 - n. Combustion
 - o. Mass
 - p. Volume

2. What does WHMIS, MSDS, and HHPS stand for?

3. Identify the following symbols:



4. Give three examples of physical and chemical properties.
5. What is the difference between a physical change and a chemical change?
6. What are the 5 signs a chemical change has occurred?

7. What are the four principles of particle theory?
8. How are compounds different then elements? How are solutions different then heterogeneous mixtures?
9. What is the only way a pure substance (an element or compound) can be separated?
10. What language is used in the periodic table? Why?
11. How would you be able to tell there is more than one atom of the same element?
12. Who invented the modern day periodic table? What does his law state?
13. What are three differences between metals and non-metals?
14. What are the names of groups 1, 2, 17 and 18 in the periodic table?
15. What are three trends that occur when you move from left to right on the period table?
16. Count the atoms for each of the following chemical symbols
 - a. H_3PO_4
 - b. $\text{C}_6\text{H}_{12}\text{O}_6$
 - c. $\text{Ca}_3(\text{PO}_4)_2$
 - d. $5\text{H}_2(\text{SO}_4)_3$
17. Fill in the following table

Element	Atomic Mass	Atomic Number	Standard Atomic Notation	Electrons	Neutrons	Protons
Cesium						
	96					
		29				
			$^{128}_{52}\text{Te}$			
				83		
					18	
						47

18. Density Questions

For all questions, these equations will be given

$$V = \pi \times r^2 \times h$$

Cylinder

$$V = L \times W \times H$$

Cube

$$\rho = \frac{M}{V}$$

(equation for
Density)

- (A) The volume of a book is 64 cm^3 and has a mass of 4000g. What is the density of the book? Will it float in water? Why or why not?
- (B) A cylinder has a radius of 5 cm and a height of 10cm. If the mass of the cylinder is 100 grams, what is the density? Will it float in water?
- (C) The length of one side of a cube is 5 cm. What is its volume? If its density was 1.5 g/cm^3 , what would be the mass of the cube? Would it float in water?
- (D) A beaker measures 200 mL. An irregular shaped object is put in the beaker and the new reading is 250mL. What is the volume of the object? If the mass of the object measured 500 grams, what is the density?

19. What were the first ideas of atoms and elements? Who discovered them? When did this happen?

20. What is an alchemist?

21. What kind of experiment did Rutherford do in Montreal? What did he discover?

22. Fill in the chart below.

Element	Standard Atomic Notation	Bohr Diagram	# of valence electrons
1. hydrogen			
2. carbon			

3. aluminum			
4. sodium			
5. argon			

23. For each of the elements in question 22 find their stable bohr diagram and then the ionic charge.