

# Introduction to Atoms Worksheet

Instructions: Match the vocabulary word with the correct definition

## Word

**Atoms**

**Protons**

**Atomic Number**

**Mass number**

**Isotopes**

**Electrons**

**Neutrons**

**Elements**

## Definitions

**Negatively charged particles outside the nucleus of an atom**

**Number of protons in an atom**

**Neutral particles found in nucleus of an atom**

**The smallest unit of matter**

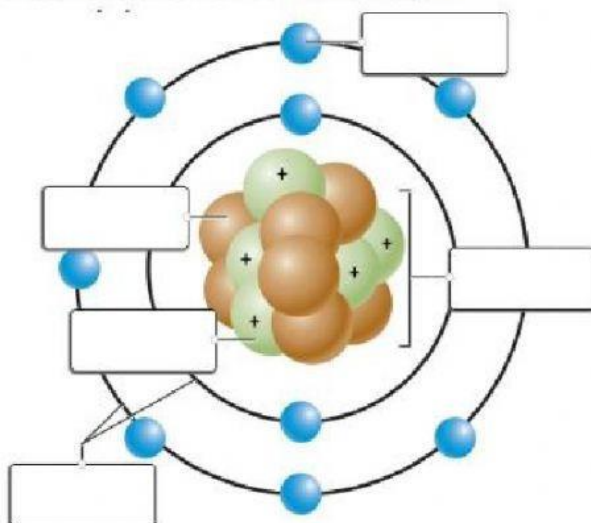
**A substance composed of one type of atom**

**Positively charged particles in the nucleus of an atom**

**The number of protons plus neutrons in the nucleus of an atom**

**Variations of elements that have the same number of protons but different numbers of neutrons**

Label the diagram of the atom below using the words on the right.



**Energy Shells**

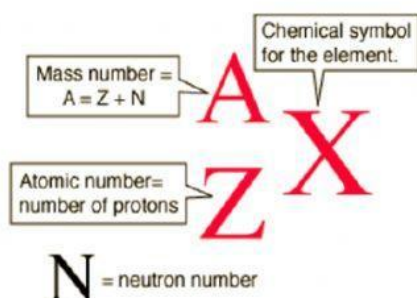
**Electrons**

**Protons**

**Neutrons**

**Nucleus**

# Nuclear Notation



number of neutrons

$$N = M - n$$

atomic mass

atomic number

Complete the table below to show the number of protons, neutrons and electrons in the elements below.

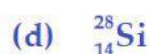
Element	Nuclear Notation	Number of		
		Protons (Z)	Neutrons (A-Z)	Electrons
Nitrogen	$^{14}_7\text{N}$	7	$14 - 7 = 7$	7
Aluminum	$^{27}_{13}\text{Al}$			
Chlorine	$^{37}_{17}\text{Cl}$			

Calculate the amount of neutrons in the following elements












20 neutrons

12 neutrons

14 neutrons

16 neutrons

8 neutrons

