

# Comparing the Structure of Atoms and Ions Worksheet

Circle the correct option.

1. According to scientists, the structure of an atom is
  - (a) mostly empty
  - (b) mainly made up of protons
  - (c) mainly made up of electrons
  - (d) mainly made up of neutrons
  
2. An atom is mainly composed of
  - (a) a large, dense, positively charged nucleus
  - (b) a small positively charged nucleus and a lot of empty space
  - (c) a large, dense, negatively charged nucleus
  - (d) a small negatively charged nucleus and a lot of empty space
  
3. When an atom loses an electron, the ion that is formed is
  - (a) positively charged and loses a tiny amount of mass
  - (b) positively charged and gains a tiny amount of mass
  - (c) negatively charged and loses a tiny amount of mass
  - (d) negatively charged and gains a tiny amount of mass
  
4. Which electron configuration is correct for a sodium (Na) ion?
  - (a) 2-7
  - (b) 2-8
  - (c) 2-8-1
  - (d) 2-8-2
  
5. A fluorine atom (F) has a mass number of 19. The total number of protons and neutrons combined is
  - (a) 9
  - (b) 10
  - (c) 19
  - (d) 38
  
6. When a  $\text{Li}^+$  ion is formed,
  - (a) a proton is gained
  - (b) a proton is lost
  - (c) an electron is lost
  - (d) an electron is gained

# Comparing the Structure of Atoms and Ions Worksheet

## Answers

1. According to scientists, the structure of an atom is

- (a) mostly empty
- (b) mainly made up of protons
- (c) mainly made up of electrons
- (d) mainly made up of neutrons

2. An atom is mainly composed of

- (a) a large, dense, positively charged nucleus
- (b) a small positively charged nucleus and a lot of empty space
- (c) a large, dense, negatively charged nucleus
- (d) a small negatively charged nucleus and a lot of empty space

3. When an atom loses an electron, the ion that is formed is

- (a) positively charged and loses a tiny amount of mass
- (b) positively charged and gains a tiny amount of mass
- (c) negatively charged and loses a tiny amount of mass
- (d) negatively charged and gains a tiny amount of mass

4. Which electron configuration is correct for a sodium (Na) ion?

- (a) 2-7
- (b) 2-8
- (c) 2-8-1
- (d) 2-8-2

5. A fluorine atom (F) has a mass number of 19. The total number of protons and neutrons combined is

- (a) 9
- (b) 10
- (c) 19
- (d) 38

6. When a  $\text{Li}^+$  ion is formed,

- (a) a proton is gained
- (b) a proton is lost
- (c) an electron is lost
- (d) an electron is gained