

## 2.4: Module 4 Practice

### Exercise 2.4.1

Name the compound below. Hint: Is it ionic or covalent? Is the cation predictable or variable?

CuCN

#### Hint

It is ionic. It is variable, so you must determine the charge needed to make a total of zero charge. Roman numeral is needed.

#### Answer

copper (I) cyanide

### Exercise 2.4.1

Name the compound below. Hint: Is it ionic or covalent? Is the cation predictable or variable?

$\text{PCl}_5$

#### Hint

It is covalent. There is no cation. Use prefixes to tell how many of each element are in the formula.

#### Answer

phosphorus pentachloride

### Exercise 2.4.1

Add exercises text here.

#### Hint

It is covalent. There is no cation. Use prefixes to tell how many of each element are in the formula.

#### Answer

Add texts here. Do not delete this text first.

### Exercise 2.4.1

Add exercises text here.

#### Hint

It is covalent. There is no cation. Use prefixes to tell how many of each element are in the formula.

#### Answer

Add texts here. Do not delete this text first.

**Exercise 2.4.1**

K            Ca  
Rb           Sr

Out of the four elements listed above, choose the one that has

- j) the largest radius
- k) the least ionization energy
- l) the most metallic character

**Answer j**

Rb

**Answer k**

Rb

**Answer l**

Rb

**Exercise 2.4.1**

The element chlorine is found in nature as a mixture of  $^{35}\text{Cl}$  and  $^{37}\text{Cl}$ . Given that the average atomic mass of chlorine is 35.45 amu, which isotope is more abundant?

**Answer**

$^{35}\text{Cl}$  is more abundant. Since the average mass is closer to 35 amu, you have more of the isotope with a mass of 35 amu than you do of the isotope with a mass of 37 amu.

**Exercise 2.4.1**

If there were chemists on another planet, their periodic table might be different because the elements might have different "natural" abundances. If on the other planet, the element sulfur had the following natural abundances, calculate the average atomic mass that the chemists on that planet would use.

68.44 % is  $^{32}\text{S}$  with mass of 31.9721 amu

23.24 % is  $^{33}\text{S}$  with mass of 32.9715 amu

8.32 % is  $^{34}\text{S}$  with mass of 33.9679 amu

**Answer**

Add up (uncertain digits are underlined):

21.8817amu

7.6626 amu

2.8261 amu

Total is 32.3704 amu which rounds to 32.37 amu

**Exercise 2.4.1**

Add exercises text here.

**Answer**

Add texts here. Do not delete this text first.

---

2.4: Module 4 Practice is shared under a [not declared](#) license and was authored, remixed, and/or curated by LibreTexts.