

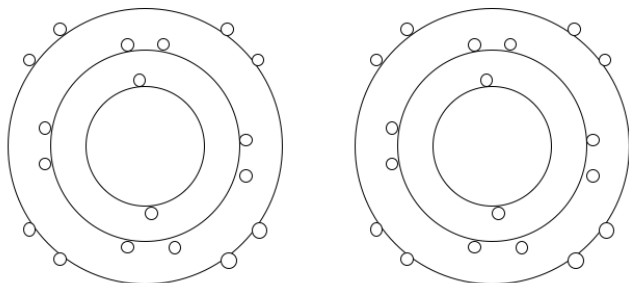
IONIC BONDING

Points: ____ / ____

Directions: For each of the following compounds, fill in dots to represent electrons. Then, draw arrows to show the transfer of electron(s). Then, write the chemical formula, electron donor (**which atom gives up 1-2 electrons?**), and electron acceptor.

1) Why do atoms form ionic bonds (*hint: it has to do with electron rings*)?

2) Sodium + Chlorine

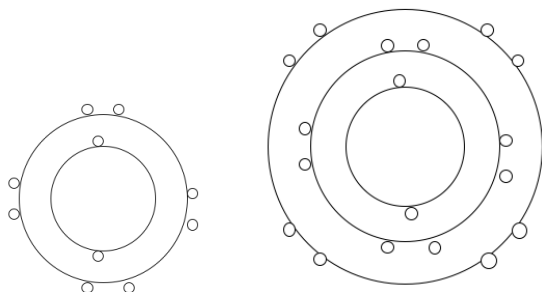


Chemical formula? _____

Electron donor? _____

Electron acceptor? _____

3) Lithium + Chlorine

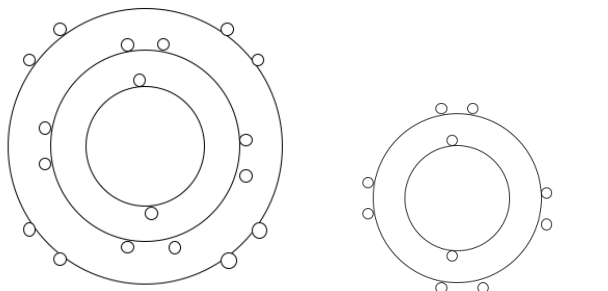


Chemical formula? _____

Electron donor? _____

Electron acceptor? _____

4) Sodium + Fluorine

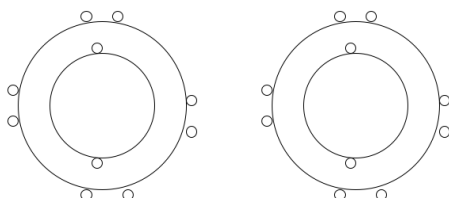


Chemical formula? _____

Electron donor? _____

Electron acceptor? _____

5) Lithium + Fluorine

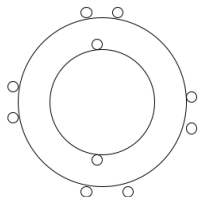
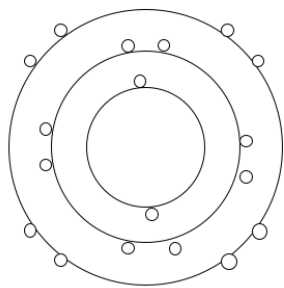


Chemical formula? _____

Electron donor? _____

Electron acceptor? _____

6) Magnesium + Oxygen

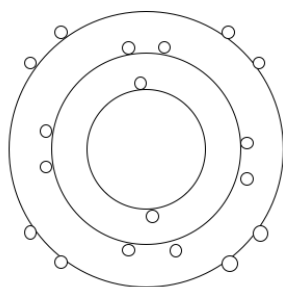
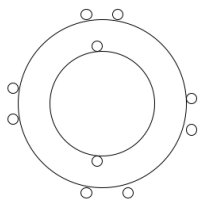


Chemical formula? _____

Electron donor? _____

Electron acceptor? _____

7) Beryllium + Sulfur

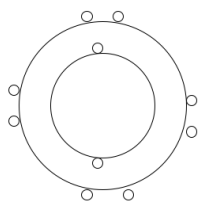
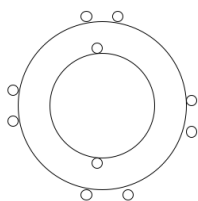


Chemical formula? _____

Electron donor? _____

Electron acceptor? _____

8) Beryllium + Oxygen

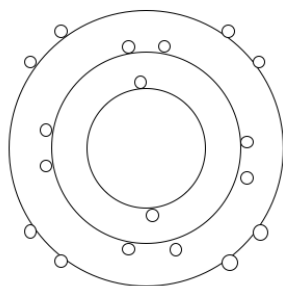
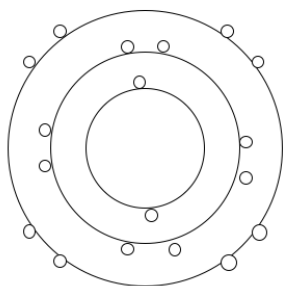


Chemical formula? _____

Electron donor? _____

Electron acceptor? _____

9) Magnesium + Sulfur



Chemical formula? _____

Electron donor? _____

Electron acceptor? _____

10) What do all the donors have in common (*hint: how many electrons are on the outer ring*)?

IONIC BONDING – Answer Key

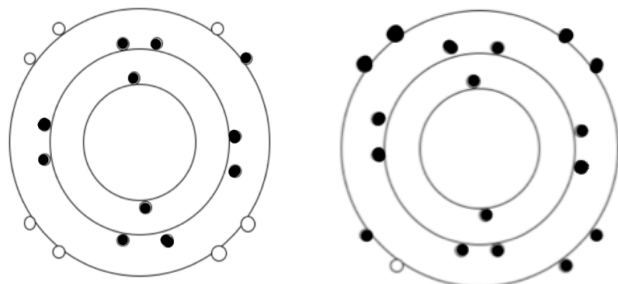
Points: ____ / ____

Directions: For each of the following compounds, **fill in dots** to represent electrons. Then, **draw** arrows to show the transfer of electron(s). Then, write the chemical formula, electron donor (**which atom gives up 1-2 electrons?**), and electron acceptor.

1) Why do atoms form ionic bonds (*hint: it has to do with electron rings*)?

In order to fill the outer ring and become chemically stable.

2) Sodium + Chlorine

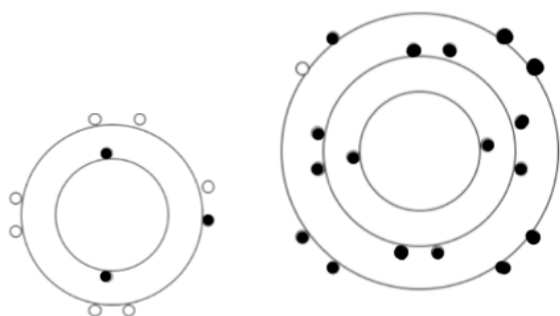


Chemical formula? **NaCl**

Electron donor? **Sodium**

Electron acceptor? **Chlorine**

3) Lithium + Chlorine

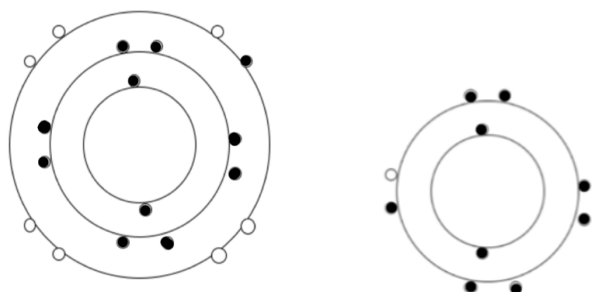


Chemical formula? **LiCl**

Electron donor? **Lithium**

Electron acceptor? **Chlorine**

4) Sodium + Fluorine

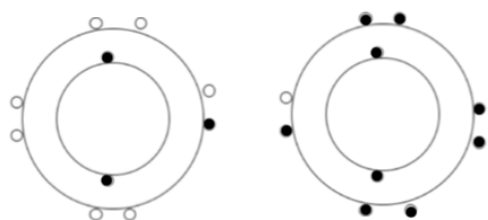


Chemical formula? **NaF**

Electron donor? **Sodium**

Electron acceptor? **Fluorine**

5) Lithium + Fluorine

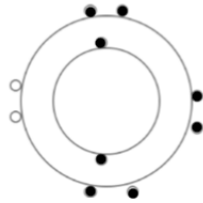
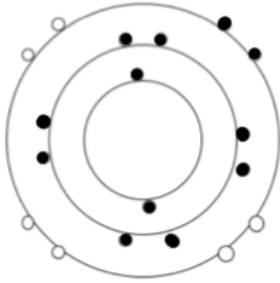


Chemical formula? **LiF**

Electron donor? **Lithium**

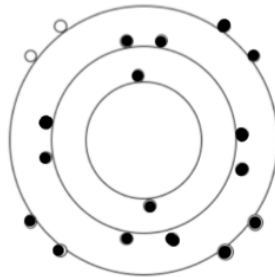
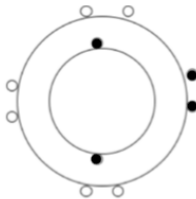
Electron acceptor? **Fluorine**

6) Magnesium + Oxygen



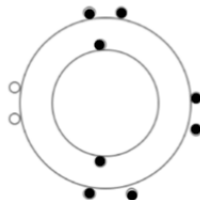
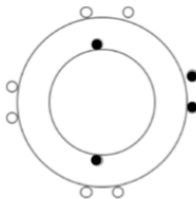
Chemical formula? **MgO**
Electron donor? **Magnesium**
Electron acceptor? **Oxygen**

7) Beryllium + Sulfur



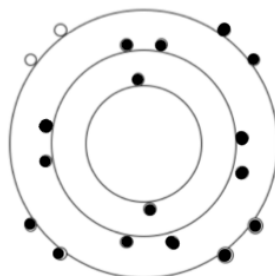
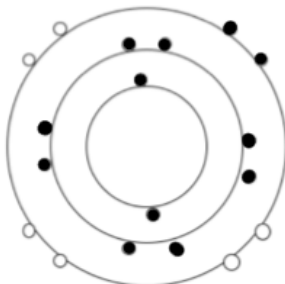
Chemical formula? **BeS**
Electron donor? **Beryllium**
Electron acceptor? **Sulfur**

8) Beryllium + Oxygen



Chemical formula? **BeO**
Electron donor? **Beryllium**
Electron acceptor? **Oxygen**

9) Magnesium + Sulfur



Chemical formula? **MgS**
Electron donor? **Magnesium**
Electron acceptor? **Sulfur**

10) What do all the donors have in common (*hint: how many electrons are on the outer ring*)?

They are all then less than half full. It is easier to get rid of 1-2 electrons, than to lose 5 or more.