

SHOW what you KNOW CHEMICAL BONDS

Name: _____

Date: _____

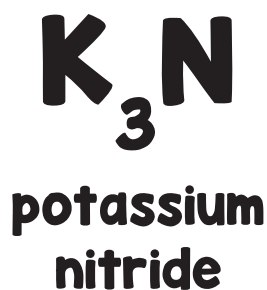
1. Identify each of the following as ionic bonding or covalent bonding.



A: _____



B: _____



C: _____

Answer the following questions.

2. How many electrons are in the outer shell of an atom that is chemically stable?

- a. 0
- b. 6
- c. 8
- d. 12

3. Chemical bonds are best described as:

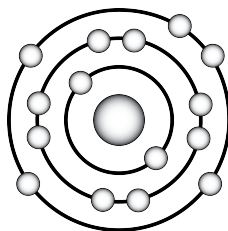
- a. a force that joins atoms together
- b. a force that joins nuclei together
- c. a force that joins protons together
- d. all of the above

4. Charged particles that form when atoms transfer electrons are _____.

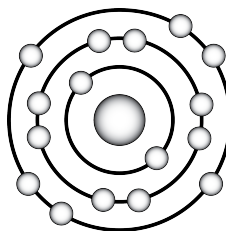
5. Electrons that are free to move throughout a substance are associated with _____ bonds.

6. Shared electrons are associated with _____ bonds.

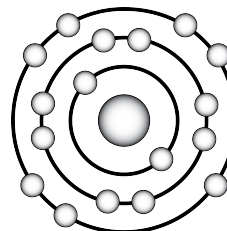
7. Which of these elements could gain one electron to form an ionic bond with potassium? Why?



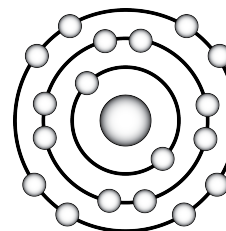
phosphorus



sulfur



chlorine



argon

8. What is another name for electrons found in the outer shell?

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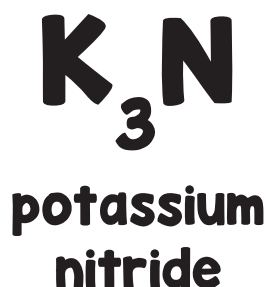
1. Identify each of the following as ionic bonding or covalent bonding.



A: **covalent**



B: **ionic**



C: **ionic**

Answer the following questions.

2. How many electrons are in the outer shell of an atom that is chemically stable?

- a. 0
- b. 6
- ☒ c. 8
- d. 12

3. Chemical bonds are best described as:

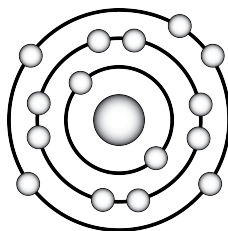
- ☒ a. a force that joins atoms together
- b. a force that joins nuclei together
- c. a force that joins protons together
- d. all of the above

4. Charged particles that form when atoms transfer electrons are **ions**.

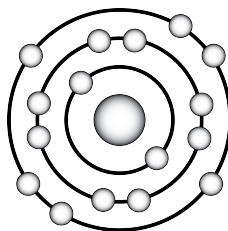
5. Electrons that are free to move throughout a substance are associated with **metallic** bonds.

6. Shared electrons are associated with **covalent** bonds.

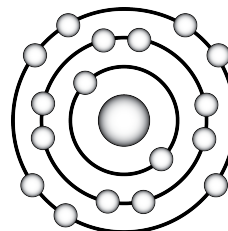
7. Which of these elements could gain one electron to form an ionic bond with potassium? Why?



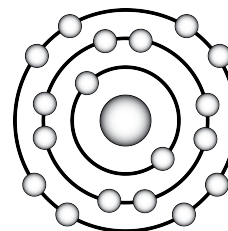
phosphorus



sulfur



chlorine



argon

Chlorine, because it has seven valence electrons and gaining one would create a stable atom with 8 valence electrons.

8. What is another name for electrons found in the outer shell?

valence