Covalent bonding: knowledge check

1. What type of bonding does this diagram represent? Circle the answer.

covalent bonding ionic bonding metallic bonding



1. Use the words to complete the sentences.

covalent electron electrons

non-metal outer

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bonding – this bonding occurs between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ atoms. In a single covalent bond, a pair of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is shared electrons between two atoms.
These shared electrons are found in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shells of the atoms. Each atom contributes one \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the shared pair of electrons.

Covalent bonding: test myself

1. What types of elements are involved in covalent bonding?

Circle the correct answer.

metal and non-metal metals only non-metals only

Are covalent bonds strong or weak? Use the correct word to complete the sentence.

strong weak

Covalent bonds are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Which of these is a covalent molecule? Use the correct word to complete the sentence.

carbon dioxide sodium chloride aluminium

The covalent molecule is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

How many electrons are there in a single covalent bond? Use the correct word to complete the sentence.

four one two

There are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons in a single covalent bond.

Covalent bonding: feeling confident? Try this!

1. Complete the bonding diagram to represent the bonding in fluorine.



Covalent bonding: what do I understand?

Think about your answers and confidence level for each mini-topic. Decide whether you understand it well, are unsure or need more help. Tick the appropriate column.

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| **Mini-topic** | **I understand this well** | **I think I understand this** | **I need more help**  |
| I can interpret diagrams representing covalent bonds. |  |  |  |
| I know that electrons are shared in covalent bonds. |  |  |  |
| I know the types of elements involved in covalent bonds. |  |  |  |
| **Feeling confident? topics** | **I understand this well** | **I think I understand this** | **I need more help** |
| I can complete a diagram to represent the formation of a covalent bond. |  |  |  |