Names And Formulas For Ionic Compounds Worksheet Answer Key PDF

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Part 1: Building a Foundation

What is the overall charge of an ionic compound?

undefined. Positive

undefined. Negative

undefined. Neutral ✓

undefined. Variable

Ionic compounds are electrically neutral, meaning they have no overall charge.

What is the overall charge of an ionic compound?

undefined. A) Positive

undefined. B) Negative

undefined. C) Neutral ✓

undefined. D) Variable

The overall charge of an ionic compound is neutral.

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The overall charge of an ionic compound is neutral.

Which of the following are characteristics of ionic compounds? (Select all that apply)

undefined. High melting points ✓

undefined. Conduct electricity when dissolved in water ✓

undefined. Low boiling points

undefined. Usually gases at room temperature

Ionic compounds typically have high melting points and can conduct electricity when dissolved in water.

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Ionic compounds typically have high melting points and conduct electricity when dissolved in water.

Define a cation and an an ion. Provide an example of each.

A cation is a positively charged ion, while an an ion is a negatively charged ion. Examples include Na+ for cation and Cl- for an ion.

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Which of the following endings is typically used for the names of single-element anions?

undefined. -ate
undefined. -ite
undefined. -ide ✓
undefined. -ous

Single-element anions typically end in -ide.

Which of the following endings is typically used for the names of single-element anions?

undefined. A) -ate
undefined. B) -ite
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The ending typically used for single-element anions is -ide.

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Part 2: Application and Analysis

What is the correct formula for calcium nitrate?

undefined. $CaNO_3$
undefined. $Ca(NO_3)_2$ ✓
undefined. Ca_2NO_3
undefined. $Ca_3(NO_3)_2$

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The correct formula for calcium nitrate is $Ca(NO_3)_2$.

Which of the following are correctly balanced formulas for ionic compounds? (Select all that apply)

undefined. Na_2O ✓
undefined. MgCl
undefined. Al_2O_3 ✓
undefined. K_2SO_4 ✓

Correctly balanced formulas include Na_2O, Al_2O_3, and K_2SO_4.

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Correctly balanced formulas include Na_2O, Al_2O_3, and K_2SO_4.

Write the formula for an ionic compound formed between aluminum and sulfate ions.

The formula for the ionic compound formed between aluminum and sulfate is $Al_2(SO_4)_3$.

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Which of the following best explains why ionic compounds have high melting points?

undefined. They are composed of large molecules.
undefined. They have strong electrostatic forces between ions. ✓
undefined. They contain metals with high atomic numbers.
undefined. They are held together by weak Van der Waals forces.

Ionic compounds have high melting points due to strong electrostatic forces between ions.

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Discuss the role of electron transfer in the formation of ionic bonds.

Electron transfer is crucial in ionic bond formation, as it leads to the creation of cations and anions.

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Part 3: Evaluation and Creation

Which of the following scenarios would most likely result in the formation of an ionic compound?

undefined. A metal reacting with a nonmetal ✓
undefined. Two nonmetals reacting
undefined. A metal reacting with another metal
undefined. A noble gas reacting with a nonmetal

The formation of an ionic compound is most likely when a metal reacts with a nonmetal.

Which of the following scenarios would most likely result in the formation of an ionic compound?

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A metal reacting with a nonmetal would most likely result in the formation of an ionic compound.

Evaluate the following statements and identify which are true about ionic compounds. (Select all that apply)

undefined. They are usually soluble in water. ✓

undefined. They can conduct electricity in solid form.

undefined. They are formed by the sharing of electrons.

undefined. They have high melting and boiling points. ✓

True statements about ionic compounds include their solubility in water and high melting and boiling points.

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True statements about ionic compounds include that they are usually soluble in water and have high melting and boiling points.

Propose a real-world application for ionic compounds and explain how their properties make them suitable for this application.

Ionic compounds are used in various applications, such as in batteries, due to their ability to conduct electricity when dissolved in water.

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Propose a real-world application for ionic compounds and explain how their properties make them suitable for this application.

Ionic compounds are used in batteries due to their ability to conduct electricity when dissolved in solution.

Reflect on what you have learned about ionic compounds. How do their properties influence their use in everyday life? Provide examples to support your answer.

Ionic compounds influence everyday life through their use in table salt, cleaning products, and batteries due to their solubility and conductivity.

Reflect on what you have learned about ionic compounds. How do their properties influence their use in everyday life? Provide examples to support your answer.

The properties of ionic compounds, such as solubility and conductivity, influence their use in various applications like salt in food and water treatment.

Reflect on what you have learned about ionic compounds. How do their properties influence their use in everyday life? Provide examples to support your answer.

The properties of ionic compounds, such as solubility and conductivity, influence their use in everyday products like table salt and batteries.