

Chapter 9 Review “Chemical Names and Formulas”

Pre-AP Chemistry
Charles Page High School
Stephen L. Cotton

Chapter 9 Review

- In which of the following are the symbol and name for the ion given correctly: a) Fe^{2+} : ferrous ion; Fe^{3+} : ferric ion, or b) Sn^{2+} : stannic ion; Sn^{4+} : stannous ion?
- Which of the following compounds contains the Mn^{3+} ion: a) MnS , or b) Mn_2O_3 ?

Chapter 9 Review

- What determines that an element is a metal?
- Suppose you encounter a chemical formula with H as the cation. What do you know about this compound?
- Binary molecular compounds are made of two _____.
- Molecular compounds are usually composed of _____.

Chapter 9 Review

- Which element, when combined with fluorine, would most likely form an ionic compound: a) lithium, or b) chlorine?
- What is the name for $\text{Sn}_3(\text{PO}_4)_2$?
- What is the name of $\text{H}_2\text{SO}_3(\text{aq})$?
- Which of the following is the correct element name, ion symbol, and ion name: a) fluorine, F^{1+} , fluoride ion, or b) copper, Cu^{1+} , cuprous ion?

Chapter 9 Review

- What is the correct name for the N^{3-} ion?
- Which of the following represents an ionic compound: a) BaI_2 , or b) PCl_3 ?
- What is the ending for the names of all binary compounds, both ionic and molecular?
- What is the correct name of N_2O_5 ?

Chapter 9 Review

- Which of the following formulas represents a molecular compound: a) ZnO , or b) SO_2 ?
- When Group 2A elements form ions, they _____.
- What is the correct formula for calcium dihydrogen phosphate?
- Which shows both the correct formula and acid name: a) $\text{HI}_{(\text{aq})}$, iodic acid, or b) $\text{H}_3\text{PO}_{4(\text{aq})}$, phosphoric acid?

Chapter 9 Review

- When naming a transition metal ion that can have more than one common ionic charge, the numerical value of the charge is indicated by a ____.
- Which of the following correctly shows a prefix used in naming binary molecular compounds with its corresponding number: a) nona-, 9, or b) hexa-, 8?

Chapter 9 Review

- What is the formula for phosphoric acid?
- In any chemical compound, the elements are always combined in the same proportion by ____.
- The nonmetals in Groups 6A and 7A have numerical charges that are found by ____.

Chapter 9 Review

- Which of the following correctly provides the names and formulas of polyatomic ions: a) carbonate: HCO_3^{1-} ; bicarbonate: CO_3^{2-} , or b) chromate: CrO_4^{2-} ; dichromate: $\text{Cr}_2\text{O}_7^{2-}$?
- What is the correct formula for barium chlorate?

Chapter 9 Review

- What is the formula for sulfurous acid?
- What is the formula for hydrosulfuric acid?
- What is true about the composition of ionic compounds?
- When naming acids, the prefix *hydro-* is used when the name of the acid anion ends in ____.

Chapter 9 Review

- When dissolved in water, acids produce ____.
- Why are systematic names preferred over common names?
- In which of the following are the symbol and name for the ion given correctly: a) OH^{1-} : hydroxide; O^{2-} : oxide, or b) PO_3^{3-} : phosphate; PO_4^{3-} : phosphite?

Chapter 9 Review

- What is the correct formula for sulfur hexafluoride?
- How are chemical formulas of binary ionic compounds generally written?
- What is produced when a base is dissolved in water?
- An *-ate* or *-ite* at the end of a compound name usually indicates that the compound contains ____.

Chapter 9 Review

- How are bases named?
- In naming a binary molecular compound, the number of atoms of each element present in the molecule is indicated by ____.
- What type of compound is CuSO_4 ?
- When the name of an anion that is part of an acid ends in *-ite*, the acid name includes the suffix ____.

Chapter 9 Review

- Sulfur hexafluoride is an example of a ____ compound.
- Which of the following is a binary molecular compound: a) AgI , or b) PCl_5 ?
- Aluminum is a Group 3A metal. Which ion does Al typically form: a) Al^{3-} , or b) Al^{3+} ?

Chapter 9 Review

- What type of ions have names ending in *-ide*?
- Determine the subscript for ammonium in the chemical formula for ammonium dichromate.
- How many iron (II) ions combine with oxygen to form iron (II) oxide?
- What is the charge of a chloride ion?

Chapter 9 Review

- What is the charge on the cation in CuSO_4 ?
- What is the ionic charge on the zirconium ion in the ionic compound zirconium oxide, ZrO_2 ?
- What is the charge on the polyatomic ions nitrite and chlorite?

Chapter 9 Review

End of Chapter 9 Review