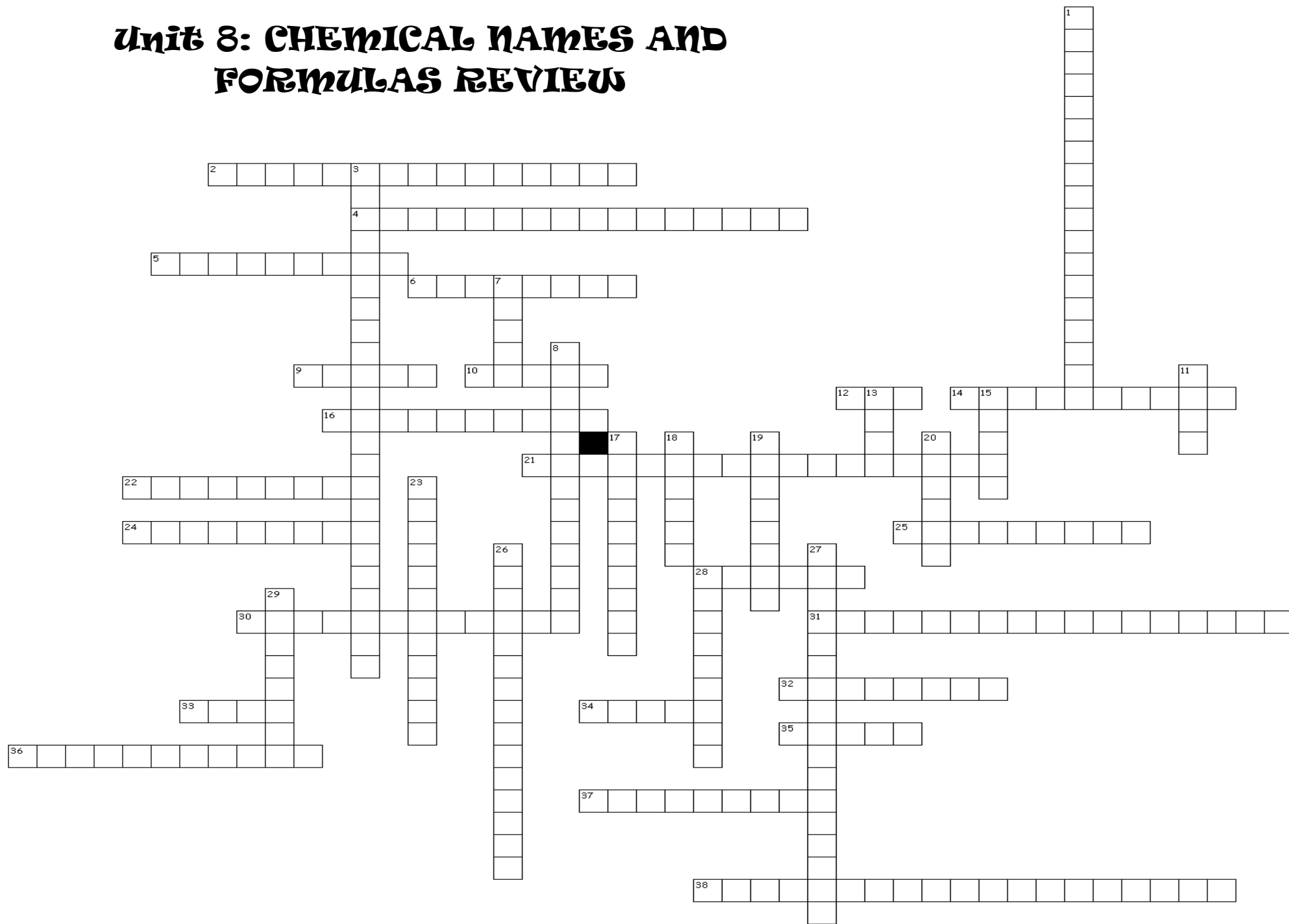


# Unit 8: CHEMICAL NAMES AND FORMULAS REVIEW



Name \_\_\_\_\_ Date \_\_\_\_\_ Mod \_\_\_\_\_ Test Date \_\_\_\_\_

## **Across**

2. The positive/negative number assigned to an element that shows its ability to combine in a compound.
4. These have various oxidation numbers
5. The simplest formula
6. A covalent bond wherein the electrons are shared equally among elements
9. The prefix for 7 in a covalent bond
10. The formula for chromium (III) and oxygen
12. The formula for calcium and oxygen
14. These have no oxidation number
16. A compound containing more than 2 different elements
21.  $\text{NH}_4\text{OH}$
22. Have higher electronegativity values
24. the angle formed by 2 bonds to the same atom
25. the mass of one mole of a chemical compound or the mass of  $6.02 \times 10^{23}$  molecules of a compound
28. Have lower electronegativity values
30. The name for the compound of calcium and oxygen
31. Shows arrangement of bonded atoms/ions within a compound
32. A chemical combination of two or more elements having different properties than the individual elements.
33. Nona is the prefix for \_\_\_ in a covalent bond
34. ammonium chloride
35. The prefix for 4 in a covalent bond
36. the sum of the average atomic masses (amu) of all the atoms represented in its formula

37. The number that tells how many atoms of an element are in a unit of the compound
38. This law states that every compound always contains the same elements in the same proportions.

## **Down**

1. Name  $\text{As}_2\text{O}_5$
3. Name  $\text{P}_4\text{O}_{10}$
7. A covalent bond wherein the electrons are not shared equally
8. Name  $\text{Na}_2\text{S}$
11. The formula for beryllium and iodine
13. silver oxide
15. compounds form in order to follow this rule which states that they need full s and p orbitals ( $8e^-$ ) in order to be stable
17. average distance between the nuclei of bonded atoms
18. The type of compound containing only two elements
19. The ion  $\text{ClO}_3^-$
20. Nickel (I) carbonate
23. These have a  $1^+$  oxidation number
26. The name for a compound of barium and hydroxide
27. Relative tendency for an element to attract  $e^-$  when bonded in a compound ( $e^-$  affinity)
28. A chemical formula that reports the actual numbers of atoms in one molecule of a compound.
29. These have a  $1^-$  oxidation number

### **Also for the exam:**

- Be able to write a chemical formula for a given set of elements/polyatomic ions. Know the oxidation numbers of the groups (as well as Zn and Ag).
- Be able to write the compound name for a given formula (ionic and covalent).
- Be able to draw the Lewis Electron Dot diagrams for ionic and covalent compounds.
- Know the properties of ionic, polar covalent, and nonpolar covalent compounds.
- Memorize the seven diatomic molecules.

### **Complete on loose-leaf:**

- ❖ Write the formula and the names for: sodium and phosphate ion; zinc and sulfate ion; iron(III) and carbonate ion; aluminum and oxygen, barium and nitrate ion, cesium and bromine, lithium and nitrogen.
- ❖ Name the following covalent compounds:  $\text{P}_4\text{S}_{10}$ ,  $\text{SiBr}_4$ ,  $\text{S}_2\text{Cl}_2$
- ❖ Write the formula for the following covalent compounds: disulfur decafluoride, dinitrogen tetroxide, chlorine trifluoride.
- ❖ Calculate the formula and molar masses for the above compounds (for the two previous bullet points).
- ❖ Calculate the mass of 0.85 mole of  $\text{H}_3\text{PO}_4$ .
- ❖ Calculate the number of moles in 75.0 grams of  $\text{CO}_2$ .