Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class period: \_\_\_\_\_\_

![MMj02889280000[1]]()Unit 7: Chemical Names and Formulas

Test Review

**What to study?**

* Quizzes
* Homework
* Notes
* Bell Ringers

**What will the questions be like? What can I expect?**

This test will be just like the previous quizzes you have taken.

* Matching
* Multiple choice
* Short answer

**Sample questions/Important Topics**

1. Please fill in the best answer:

1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ contains all the elements, arranged according to similarities in their properties.
2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are on the right hand side of the “staircase”
3. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are on the left hand side of the “staircase”
4. Although \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is on the left hand side of the “staircase” on the periodic table, it is a non-metal.
5. The two types of compounds are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ compounds are formed when atoms transfer electrons.
7. Atoms that gain electrons get a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ charge.
8. Metals tend to form ions with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ charge.
9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are huge conglomerations of + and – ions in a 3-dimensional, repeating pattern.
10. Molecular compounds are formed when atoms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons.
11. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an electrically neutral group of atoms that act together as a unit.
12. Molecular compounds are formed when \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bond together.
13. Of the two types of compounds, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ compounds have a much higher melting point.
14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ compounds are good conductors if they are dissolved in water, (aqueous state).
15. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ indicates the makeup of a compound.
16. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ formula tells the smallest whole number ratio of + to – ions within an ionic compound.
17. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ formula tells the exact makeup of 1 molecule of a molecular compound.
18. The electrons in an atom’s outermost shell are called its \_\_\_\_\_\_\_\_\_\_\_\_\_ electrons.
19. Sodium wants to lose \_\_\_\_\_\_\_\_\_\_ electron to become isoelectronic with Neon.
20. When magnesium gets the same electron configuration as Ne it has a \_\_\_\_\_\_\_ charge.
21. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ covalent bond consists of 2 shared electrons.
22. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_says that most atoms want 8 electrons in their outermost shell.
23. In ionic bonding, the two ways atoms can get the same configuration as a noble gas is by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons.
24. In covalent bonding, atoms \_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons.
25. Atoms in group 15 will \_\_\_\_\_\_\_\_\_\_ three electrons to get a –3 charge.
26. Molecules with 5 atoms, like CH4, will have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shape.
27. The VSEPR theory stands for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ theory.
28. Ar and Cl-1 have the same electron configuration, so they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with each other.
29. I-1 has the same electron configuration as the noble gas \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
30. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the only noble gas with 2 valence electrons.
31. Ionic compounds are made up of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which are very large structures consisting of alternating + and – ions.
32. When atoms lose electrons they get a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ charge.
33. When nitrogen bonds covalently it will make a total of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ bonds.
34. Ionic compounds will not conduct an electric current in the \_\_\_\_\_\_\_\_\_\_\_ state.
35. Metals are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which means they can be hammered into different shapes.
36. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the only element in group 1 to bond covalently.
37. Molecules with a trigonal bipyramid shape have a total of \_\_\_\_\_\_\_\_\_\_\_ atoms in the molecule.
38. The difference between the trigonal planar and pyramid shapes is that the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ shape has an unshared pair of electrons on the central atom.
39. A double covalent bond consists of \_\_\_\_\_\_\_\_\_\_\_\_\_ shared electrons.
40. The 2 types of bonding are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
41. In a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ covalent bond, electrons are shared unequally.
42. For the element **potassium**,
43. Write the electron configuration
44. Write the electron dot structure:
45. How many electrons will it lose or gain to attain a noble gas configuration?
46. What charge will it have when it loses or gains those electrons?
47. Write the new electron configuration
48. What noble gas is it now isoelectronic with?
49. For the element **nitrogen**,
50. Write the electron configuration
51. Write the electron dot structure:
52. How many electrons will it lose or gain to attain a noble gas configuration?
53. What charge will it have when it loses or gains those electrons?
54. Write the new electron configuration
55. What noble gas is it now isoelectronic with?
56. If K and N bonded together, what would the formula be for the compound they would form? Use electron dot structures to show how this would happen.
57. Write the formulas for the following **IONIC** compounds.
58. Potassium nitride
59. Iron(III) sulfite
60. Calcium oxide
61. Tin(IV) carbonate
62. Gallium chlorate
63. Zinc oxalate
64. Magnesium phosphate
65. Cobalt(III) permanganate
66. Silver sulfate
67. Lead(IV) fluoride
68. Name the following **IONIC** compounds.
69. Na(BrO3)
70. K3(AsO4)
71. Sr(NO2)2
72. Mg(HSO4)2
73. NiCl2
74. Ba3P2
75. Al2(SO3)3
76. Ag(IO3)
77. Be(C2O4)
78. (NH4)2S
79. SnF2
80. Hg2Br2
81. Co(PO4)
82. Fe(CO3)
83. Pb(NO3)4
84. Cu2(SO3)
85. Cr3N2
86. Sn(CrO4)2
87. Co2(Cr2O7)3
88. Hg(CN)2
89. Draw the *structural formula* for each of the following molecules AND indicate if it is *polar or non-polar:*
90. CH4
91. Br2
92. IF
93. SiS2
94. SbI3
95. SeCl2
96. Draw the *structural formula* for the following molecules and *indicate their shapes.*
97. SCl2
98. HI
99. SeNF
100. COS
101. PBr3
102. SiS2
103. SbF5
104. Write the formulas for the following **MOLECULAR** compounds.
105. Silicon tetrabromide
106. Sulfur trioxide
107. Diselenium hexafluoride
108. Tetrabromine decaiodide
109. Phosphorus pentachloride
110. Diiodine nonachloride
111. Arsenic heptaoxide
112. Oxygen dichloride
113. Name the following **MOLECULAR** compounds.
	1. S3O9
	2. P4O10
	3. SiI4
	4. NCl3
	5. S2Cl6
	6. AsF5
	7. IBr7
	8. C3H8
	9. SbCl3
	10. TeCl6
114. Write formulas for the following **ACIDS:**
115. Chloric acid
116. Hydrobromic acid
117. Phosphorous acid
118. Chlorous acid
119. Bromic acid
120. Name the following **ACIDS**:
121. H3(AsO4)
122. H(ClO2)
123. HF
124. H(HS)
125. H(ClO)