

Final Exam Review2014

Answer Section

MATCHING

1. ANS: H PTS: 1 DIF: L1 REF: p. 357
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. STA: C5.2A
2. ANS: B PTS: 1 DIF: L1 REF: p. 372
OBJ: 12.3.2 Calculate theoretical yield, actual yield, or percent yield given appropriate information.
3. ANS: E PTS: 1 DIF: L1 REF: p. 369
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
4. ANS: G PTS: 1 DIF: L1 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. STA: C5.2A
5. ANS: C PTS: 1 DIF: L1 REF: p. 369
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
6. ANS: A PTS: 1 DIF: L1 REF: p. 372
OBJ: 12.3.2 Calculate theoretical yield, actual yield, or percent yield given appropriate information.
7. ANS: F PTS: 1 DIF: L1 REF: p. 357
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. | 12.1.3 Identify the quantities that are always conserved in chemical reactions. STA: C5.2A
8. ANS: D PTS: 1 DIF: L1 REF: p. 372
OBJ: 12.3.2 Calculate theoretical yield, actual yield, or percent yield given appropriate information.
9. ANS: F PTS: 1 DIF: L1 REF: p. 198
OBJ: 7.2.2 Describe three properties of ionic compounds. STA: C4.3i | C5.5d
10. ANS: B PTS: 1 DIF: L1 REF: p. 188
OBJ: 7.1.2 Explain how the octet rule applies to atoms of metallic and nonmetallic elements.
11. ANS: G PTS: 1 DIF: L1 REF: p. 201
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
12. ANS: D PTS: 1 DIF: L1 REF: p. 188
OBJ: 7.1.4 Explain how anions form. STA: C4.10A | C4.8D
13. ANS: E PTS: 1 DIF: L1 REF: p. 187
OBJ: 7.1.1 Determine the number of valence electrons in an atom of a representative element.
14. ANS: A PTS: 1 DIF: L1 REF: p. 192
OBJ: 7.1.4 Explain how anions form. STA: C4.10A | C4.8D
15. ANS: C PTS: 1 DIF: L1 REF: p. 194
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.

16. ANS: C PTS: 1 DIF: L1 REF: p. 218
OBJ: 8.1.2 Describe the information a molecular formula provides.
STA: P4.p2A
17. ANS: E PTS: 1 DIF: L1 REF: p. 238
OBJ: 8.4.1 Describe how electronegativity values determine the charge distribution in a polar molecule.
STA: C4.4b
18. ANS: F PTS: 1 DIF: L1 REF: p. 241
OBJ: 8.4.3 Evaluate the strength of intermolecular attractions compared with the strength of ionic and covalent bonds. STA: C2.1c | C4.3d | C4.3f
19. ANS: B PTS: 1 DIF: L1 REF: p. 221
OBJ: 8.2.1 Describe how electrons are shared to form a covalent bonds and identify exceptions to the octet rule. STA: C5.5A | C5.5c
20. ANS: A PTS: 1 DIF: L1 REF: p. 223
OBJ: 8.2.4 Distinguish between a covalent bond and a coordinate covalent bond and describe how the strength of a covalent bond is related to its bond dissociation energy.
STA: C2.1a | C2.1b | C3.2b
21. ANS: D PTS: 1 DIF: L1 REF: p. 217
OBJ: 8.2.1 Describe how electrons are shared to form a covalent bonds and identify exceptions to the octet rule. STA: C5.5A | C5.5c
22. ANS: C PTS: 1 DIF: L1 REF: p. 273
OBJ: 9.4.3 Apply the rules for naming bases. STA: C4.2c | C5.7A
23. ANS: D PTS: 1 DIF: L1 REF: p. 274
OBJ: 9.5.1 Define the laws of definition proportions and multiple proportions.
24. ANS: E PTS: 1 DIF: L1 REF: p. 274
OBJ: 9.5.1 Define the laws of definition proportions and multiple proportions.
25. ANS: H PTS: 1 DIF: L1 REF: p. 254
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
26. ANS: I PTS: 1 DIF: L1 REF: p. 257
OBJ: 9.1.2 Define a polyatomic ion and write the names and formulas of the most common polyatomic ions.
27. ANS: F PTS: 1 DIF: L1 REF: p. 253
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
28. ANS: B PTS: 1 DIF: L1 REF: p. 271
OBJ: 9.4.1 Apply three rules for naming acids. STA: C4.2A | C4.2c
29. ANS: A PTS: 1 DIF: L1 REF: p. 253
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
30. ANS: G PTS: 1 DIF: L1 REF: p. 261
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
31. ANS: C PTS: 1 DIF: L1 REF: p. 290
OBJ: 10.1.2 Relate Avogadro's number to a mole of a substance.
STA: C4.6b

32. ANS: B PTS: 1 DIF: L1 REF: p. 290
OBJ: 10.2.1 Describe how to convert the mass of a substance to the number of moles of a substance, and moles to mass. STA: C4.6a
33. ANS: E PTS: 1 DIF: L1 REF: p. 300
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
34. ANS: A PTS: 1 DIF: L1 REF: p. 290
OBJ: 10.1.2 Relate Avogadro's number to a mole of a substance.
STA: C4.6b
35. ANS: F PTS: 1 DIF: L1 REF: p. 309
OBJ: 10.3.2 Interpret an empirical formula. STA: C4.1b
36. ANS: D PTS: 1 DIF: L1 REF: p. 305
OBJ: 10.3.1 Describe how to calculate the percent by mass of an element in a compound.
STA: C4.1a
37. ANS: C PTS: 1 DIF: L1 REF: p. 294
OBJ: 10.1.3 Distinguish between the atomic mass of an element and its molar mass.
38. ANS: B PTS: 1 DIF: L1 REF: p. 294 | p. 295
OBJ: 10.1.3 Distinguish between the atomic mass of an element and its molar mass. | 10.1.4 Describe how the mass of a mole of a compound is calculated.
39. ANS: A PTS: 1 DIF: L1 REF: p. 300
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
40. ANS: E PTS: 1 DIF: L1 REF: p. 232
OBJ: 8.3.2 Describe how VSEPR theory helps predict the shapes of molecules.
41. ANS: B PTS: 1 DIF: L1 REF: p. 230
OBJ: 8.3.1 Describe the relationship between atomic and molecular orbitals.
STA: C4.8h
42. ANS: F PTS: 1 DIF: L1 REF: p. 232
OBJ: 8.3.2 Describe how VSEPR theory helps predict the shapes of molecules.
43. ANS: A PTS: 1 DIF: L1 REF: p. 243
OBJ: 8.4.4 Identify the reason network solids have high melting points.
STA: C4.3c | C4.4a
44. ANS: D PTS: 1 DIF: L1 REF: p. 226
OBJ: 8.2.5 Describe how oxygen atoms are bonded in ozone.
45. ANS: G PTS: 1 DIF: L1 REF: p. 230
OBJ: 8.3.1 Describe the relationship between atomic and molecular orbitals.
STA: C4.8h
46. ANS: C PTS: 1 DIF: L1 REF: p. 240
OBJ: 8.4.3 Evaluate the strength of intermolecular attractions compared with the strength of ionic and covalent bonds. STA: C2.1c | C4.3d | C4.3f
47. ANS: E PTS: 1 DIF: L1 REF: p. 323
OBJ: 11.1.2 Describe how to write a skeleton equation
48. ANS: A PTS: 1 DIF: L1 REF: p. 323
OBJ: 11.1.2 Describe how to write a skeleton equation
49. ANS: B PTS: 1 DIF: L1 REF: p. 323
OBJ: 11.1.2 Describe how to write a skeleton equation

50. ANS: C PTS: 1 DIF: L1 REF: p. 323
OBJ: 11.1.3 Describe the steps for writing a balanced chemical equation.
STA: C5.2A
51. ANS: D PTS: 1 DIF: L1 REF: p. 325
OBJ: 11.1.3 Describe the steps for writing a balanced chemical equation.
STA: C5.2A
52. ANS: C PTS: 1 DIF: L1 REF: p. 336 | p. 337
OBJ: 11.2.1 Describe the five general types of reactions.
53. ANS: D PTS: 1 DIF: L1 REF: p. 332
OBJ: 11.2.1 Describe the five general types of reactions.
54. ANS: B PTS: 1 DIF: L1 REF: p. 333
OBJ: 11.2.1 Describe the five general types of reactions.
55. ANS: A PTS: 1 DIF: L1 REF: p. 333
OBJ: 11.2.2 Predict the products of the five general types of reactions.
STA: C5.6b

MULTIPLE CHOICE

56. ANS: D PTS: 1 DIF: L1 REF: p. 240
OBJ: 8.4.3 Evaluate the strength of intermolecular attractions compared with the strength of ionic and covalent bonds. STA: C2.1c | C4.3d | C4.3f
57. ANS: C PTS: 1 DIF: L2 REF: p. 307
OBJ: 10.3.1 Describe how to calculate the percent by mass of an element in a compound.
STA: C4.1a
58. ANS: C PTS: 1 DIF: L2 REF: p. 195
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
59. ANS: D PTS: 1 DIF: L2 REF: p. 360 | p. 361 | p. 362
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
60. ANS: B PTS: 1 DIF: L2 REF: p. 299
OBJ: 10.2.1 Describe how to convert the mass of a substance to the number of moles of a substance, and moles to mass. STA: C4.6a
61. ANS: B PTS: 1 DIF: L1 REF: p. 254 | p. 255
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
62. ANS: A PTS: 1 DIF: L1 REF: p. 330 | p. 337
OBJ: 11.2.2 Predict the products of the five general types of reactions.
STA: C5.6b
63. ANS: C PTS: 1 DIF: L2 REF: p. 305 | p. 306
OBJ: 10.3.1 Describe how to calculate the percent by mass of an element in a compound.
STA: C4.1a
64. ANS: D PTS: 1 DIF: L2 REF: p. 290 | p. 291
OBJ: 10.1.2 Relate Avogadro's number to a mole of a substance.
STA: C4.6b
65. ANS: C PTS: 1 DIF: L1 REF: p. 188
OBJ: 7.1.1 Determine the number of valence electrons in an atom of a representative element.

66. ANS: D PTS: 1 DIF: L2 REF: p. 262
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
67. ANS: A PTS: 1 DIF: L1 REF: p. 324 | p. 325
OBJ: 11.1.3 Describe the steps for writing a balanced chemical equation.
STA: C5.2A
68. ANS: C PTS: 1 DIF: L2 REF: p. 363 | p. 364 | p. 365 | p. 366
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
69. ANS: C PTS: 1 DIF: L2 REF: p. 264 | p. 265 | p. 266
OBJ: 9.1.3 Identify the two common endings for the names of most polyatomic ions. | 9.2.2 Apply the rules for naming and writing formulas for compounds with polyatomic ions.
STA: C4.2d | C4.2c
70. ANS: D PTS: 1 DIF: L2 REF: p. 262
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
71. ANS: A PTS: 1 DIF: L1 REF: p. 324 | p. 325
OBJ: 11.1.3 Describe the steps for writing a balanced chemical equation.
STA: C5.2A
72. ANS: D PTS: 1 DIF: L1 REF: p. 333
OBJ: 11.2.1 Describe the five general types of reactions.
73. ANS: A PTS: 1 DIF: L1 REF: p. 323
OBJ: 11.1.2 Describe how to write a skeleton equation
74. ANS: D PTS: 1 DIF: L1 REF: p. 333
OBJ: 11.2.2 Predict the products of the five general types of reactions.
STA: C5.6b
75. ANS: D PTS: 1 DIF: L1 REF: p. 268
OBJ: 9.3.1 Interpret the prefixes in the names of molecular compounds in terms of their chemical formulas. | 9.3.2 Apply the rules for naming and writing formulas for binary molecular compounds.
STA: C4.2d
76. ANS: D PTS: 1 DIF: L1 REF: p. 189
OBJ: 7.1.1 Determine the number of valence electrons in an atom of a representative element.
77. ANS: B PTS: 1 DIF: L2 REF: p. 222
OBJ: 8.2.1 Describe how electrons are shared to form a covalent bonds and identify exceptions to the octet rule. | 8.2.4 Distinguish between a covalent bond and a coordinate covalent bond and describe how the strength of a covalent bond is related to its bond dissociation energy.
STA: C5.5A | C5.5c
78. ANS: C PTS: 1 DIF: L2 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. STA: C5.2A
79. ANS: D PTS: 1 DIF: L1 REF: p. 261 | p. 269
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds. | 9.3.2 Apply the rules for naming and writing formulas for binary molecular compounds.
STA: C4.2A | C4.2B | C5.5B
80. ANS: C PTS: 1 DIF: L1 REF: p. 201
OBJ: 7.3.1 Model the valence electrons of metal atoms. STA: C4.3h | C5.5e

81. ANS: C PTS: 1 DIF: L1 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. | 12.1.3 Identify the quantities that are always conserved in chemical reactions. STA: C5.2A
82. ANS: D PTS: 1 DIF: L1 REF: p. 194
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
83. ANS: C PTS: 1 DIF: L1 REF: p. 307
OBJ: 10.3.1 Describe how to calculate the percent by mass of an element in a compound.
STA: C4.1a
84. ANS: B PTS: 1 DIF: L1 REF: p. 260
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
85. ANS: B PTS: 1 DIF: L2 REF: p. 261
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
86. ANS: B PTS: 1 DIF: L2 REF: p. 254
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
87. ANS: A PTS: 1 DIF: L1 REF: p. 254
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
88. ANS: A PTS: 1 DIF: L1 REF: p. 191
OBJ: 7.1.4 Explain how anions form. STA: C4.10A | C4.8D
89. ANS: B PTS: 1 DIF: L1 REF: p. 302
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
90. ANS: A PTS: 1 DIF: L2 REF: p. 336
OBJ: 11.2.1 Describe the five general types of reactions.
91. ANS: A PTS: 1 DIF: L1 REF: p. 194
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
92. ANS: B PTS: 1 DIF: L2 REF: p. 192
OBJ: 7.1.4 Explain how anions form. STA: C4.10A | C4.8D
93. ANS: C PTS: 1 DIF: L2 REF: p. 360 | p. 361 | p. 362
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
94. ANS: D PTS: 1 DIF: L2 REF: p. 262 | p. 263
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
95. ANS: B PTS: 1 DIF: L2 REF: p. 371
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
96. ANS: D PTS: 1 DIF: L1 REF: p. 365
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
97. ANS: B PTS: 1 DIF: L2 REF: p. 297 | p. 298
OBJ: 10.2.1 Describe how to convert the mass of a substance to the number of moles of a substance, and moles to mass. STA: C4.6a

98. ANS: C PTS: 1 DIF: L2 REF: p. 233
OBJ: 8.3.2 Describe how VSEPR theory helps predict the shapes of molecules.
99. ANS: D PTS: 1 DIF: L3 REF: p. 301
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
100. ANS: A PTS: 1 DIF: L2 REF: p. 360 | p. 361 | p. 362
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
101. ANS: C PTS: 1 DIF: L2 REF: p. 363 | p. 364 | p. 365 | p. 366
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
102. ANS: C PTS: 1 DIF: L1 REF: p. 295
OBJ: 10.1.4 Describe how the mass of a mole of a compound is calculated.
103. ANS: A PTS: 1 DIF: L1 REF: p. 309
OBJ: 10.3.2 Interpret an empirical formula. STA: C4.1b
104. ANS: C PTS: 1 DIF: L1 REF: p. 230
OBJ: 8.3.1 Describe the relationship between atomic and molecular orbitals.
STA: C4.8h
105. ANS: D PTS: 1 DIF: L2 REF: p. 261 | p. 262 | p. 277
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds. | 9.5.2 Apply the rules for naming chemical compounds by using a flowchart.
STA: C4.2A | C4.2B | C5.5B
106. ANS: B PTS: 1 DIF: L2 REF: p. 253 | p. 254 | p. 262
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
107. ANS: B PTS: 1 DIF: L2 REF: p. 360 | p. 361 | p. 362
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
108. ANS: C PTS: 1 DIF: L3 REF: p. 194
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
109. ANS: D PTS: 1 DIF: L2 REF: p. 359 | p. 360
OBJ: 12.2.1 Construct mole ratios from balanced chemical equations and apply these ratios in mole-mole stoichiometric calculations.
110. ANS: D PTS: 1 DIF: L1 REF: p. 257 | p. 278
OBJ: 9.1.3 Identify the two common endings for the names of most polyatomic ions. | 9.5.3 Apply the rules for writing chemical formulas by using a flowchart. STA: C4.2d | C4.2B
111. ANS: C PTS: 1 DIF: L2 REF: p. 307
OBJ: 10.3.1 Describe how to calculate the percent by mass of an element in a compound.
STA: C4.1a
112. ANS: D PTS: 1 DIF: L2 REF: p. 305 | p. 306
OBJ: 10.3.1 Describe how to calculate the percent by mass of an element in a compound.
STA: C4.1a
113. ANS: C PTS: 1 DIF: L2 REF: p. 262 | p. 263
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
114. ANS: B PTS: 1 DIF: L1 REF: p. 369
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e

115. ANS: D PTS: 1 DIF: L1 REF: p. 194
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
116. ANS: A PTS: 1 DIF: L3 REF: p. 257 | p. 264
OBJ: 9.2.2 Apply the rules for naming and writing formulas for compounds with polyatomic ions. |
9.5.2 Apply the rules for naming chemical compounds by using a flowchart.
STA: C4.2d | C4.2c
117. ANS: A PTS: 1 DIF: L2 REF: p. 253 | p. 254
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
118. ANS: C PTS: 1 DIF: L2 REF: p. 371
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of
product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
119. ANS: B PTS: 1 DIF: L1 REF: p. 254
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
120. ANS: D PTS: 1 DIF: L2 REF: p. 269
OBJ: 9.3.2 Apply the rules for naming and writing formulas for binary molecular compounds.
STA: C4.2A | C4.2B | C5.5B
121. ANS: C PTS: 1 DIF: L2 REF: p. 371
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of
product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
122. ANS: B PTS: 1 DIF: L1 REF: p. 323
OBJ: 11.1.2 Describe how to write a skeleton equation
123. ANS: D PTS: 1 DIF: L1 REF: p. 290
OBJ: 10.1.2 Relate Avogadro's number to a mole of a substance.
STA: C4.6b
124. ANS: C PTS: 1 DIF: L2 REF: p. 360 | p. 361 | p. 362
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles,
mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
125. ANS: D PTS: 1 DIF: L2 REF: p. 334 | p. 335
OBJ: 11.2.1 Describe the five general types of reactions.
126. ANS: A PTS: 1 DIF: L2 REF: p. 254 | p. 255
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
127. ANS: A PTS: 1 DIF: L2 REF: p. 300
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
128. ANS: D PTS: 1 DIF: L1 REF: p. 321
OBJ: 11.1.1 Describe how to write a word equation.
129. ANS: D PTS: 1 DIF: L3 REF: p. 257 | p. 264
OBJ: 9.2.2 Apply the rules for naming and writing formulas for compounds with polyatomic ions. |
9.5.2 Apply the rules for naming chemical compounds by using a flowchart.
STA: C4.2d | C4.2c
130. ANS: B PTS: 1 DIF: L2 REF: p. 194
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.

131. ANS: D PTS: 1 DIF: L2 REF: p. 360 | p. 361 | p. 362
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
132. ANS: C PTS: 1 DIF: L2 REF: p. 268
OBJ: 9.3.2 Apply the rules for naming and writing formulas for binary molecular compounds.
STA: C4.2A | C4.2B | C5.5B
133. ANS: D PTS: 1 DIF: L1 REF: p. 363 | p. 364 | p. 365 | p. 366
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
134. ANS: C PTS: 1 DIF: L2 REF: p. 333 | p. 334
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135. ANS: D PTS: 1 DIF: L1 REF: p. 198
OBJ: 7.2.2 Describe three properties of ionic compounds. STA: C4.3i | C5.5d
136. ANS: C PTS: 1 DIF: L2 REF: p. 257
OBJ: 9.1.2 Define a polyatomic ion and write the names and formulas of the most common polyatomic ions.
137. ANS: C PTS: 1 DIF: L2 REF: p. 301
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
138. ANS: C PTS: 1 DIF: L2 REF: p. 192 | p. 194
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
139. ANS: B PTS: 1 DIF: L1 REF: p. 188
OBJ: 7.1.1 Determine the number of valence electrons in an atom of a representative element.
140. ANS: A PTS: 1 DIF: L2 REF: p. 359 | p. 360
OBJ: 12.2.1 Construct mole ratios from balanced chemical equations and apply these ratios in mole-mole stoichiometric calculations.
141. ANS: A PTS: 1 DIF: L1 REF: p. 336
OBJ: 11.2.1 Describe the five general types of reactions.
142. ANS: D PTS: 1 DIF: L1 REF: p. 325
OBJ: 11.1.3 Describe the steps for writing a balanced chemical equation.
STA: C5.2A
143. ANS: A PTS: 1 DIF: L2 REF: p. 269 | p. 277
OBJ: 9.3.2 Apply the rules for naming and writing formulas for binary molecular compounds. | 9.5.3 Apply the rules for writing chemical formulas by using a flowchart.
STA: C4.2A | C4.2B | C5.5B
144. ANS: D PTS: 1 DIF: L2 REF: p. 371
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
145. ANS: A PTS: 1 DIF: L2 REF: p. 363 | p. 364 | p. 365 | p. 366
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
146. ANS: A PTS: 1 DIF: L1 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. | 12.1.3 Identify the quantities that are always conserved in chemical reactions. STA: C5.2A
147. ANS: C PTS: 1 DIF: L2 REF: p. 310
OBJ: 10.3.2 Interpret an empirical formula. STA: C4.1b

148. ANS: C PTS: 1 DIF: L1 REF: p. 336 | p. 337
OBJ: 11.2.1 Describe the five general types of reactions.
149. ANS: C PTS: 1 DIF: L2 REF: p. 363 | p. 364 | p. 365 | p. 366
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
150. ANS: C PTS: 1 DIF: L1 REF: p. 254
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions.
STA: C4.9A
151. ANS: D PTS: 1 DIF: L2 REF: p. 302
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
152. ANS: D PTS: 1 DIF: L2 REF: p. 307
OBJ: 10.3.1 Describe how to calculate the percent by mass of an element in a compound.
STA: C4.1a
153. ANS: A PTS: 1 DIF: L2 REF: p. 192 | p. 195
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
154. ANS: D PTS: 1 DIF: L2 REF: p. 257 | p. 261 | p. 262
OBJ: 9.2.2 Apply the rules for naming and writing formulas for compounds with polyatomic ions.
STA: C4.2d | C4.2c
155. ANS: C PTS: 1 DIF: L1 REF: p. 254 | p. 255 | p. 257
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions. |
9.1.2 Define a polyatomic ion and write the names and formulas of the most common polyatomic ions.
STA: C4.9A
156. ANS: C PTS: 1 DIF: L1 REF: p. 359 | p. 360
OBJ: 12.2.1 Construct mole ratios from balanced chemical equations and apply these ratios in mole-mole stoichiometric calculations.
157. ANS: C PTS: 1 DIF: L2 REF: p. 302
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
158. ANS: D PTS: 1 DIF: L2 REF: p. 299
OBJ: 10.2.1 Describe how to convert the mass of a substance to the number of moles of a substance, and moles to mass. STA: C4.6a
159. ANS: C PTS: 1 DIF: L2 REF: p. 192
OBJ: 7.1.4 Explain how anions form. STA: C4.10A | C4.8D
160. ANS: D PTS: 1 DIF: L1 REF: p. 201
OBJ: 7.3.1 Model the valence electrons of metal atoms. STA: C4.3h | C5.5e
161. ANS: B PTS: 1 DIF: L2 REF: p. 360 | p. 361 | p. 362
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
162. ANS: D PTS: 1 DIF: L1 REF: p. 333
OBJ: 11.2.1 Describe the five general types of reactions.
163. ANS: B PTS: 1 DIF: L2 REF: p. 262
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
164. ANS: A PTS: 1 DIF: L2 REF: p. 301
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
165. ANS: C PTS: 1 DIF: L1 REF: p. 373
OBJ: 12.3.2 Calculate theoretical yield, actual yield, or percent yield given appropriate information.
166. ANS: D PTS: 1 DIF: L1 REF: p. 187
OBJ: 7.1.1 Determine the number of valence electrons in an atom of a representative element.

167. ANS: D PTS: 1 DIF: L2 REF: p. 301
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
168. ANS: D PTS: 1 DIF: L1 REF: p. 290
OBJ: 10.1.2 Relate Avogadro's number to a mole of a substance.
STA: C4.6b
169. ANS: B PTS: 1 DIF: L2 REF: p. 195
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
170. ANS: C PTS: 1 DIF: L2 REF: p. 375
OBJ: 12.3.2 Calculate theoretical yield, actual yield, or percent yield given appropriate information.
171. ANS: B PTS: 1 DIF: L2 REF: p. 369
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
172. ANS: D PTS: 1 DIF: L1 REF: p. 325
OBJ: 11.1.3 Describe the steps for writing a balanced chemical equation.
STA: C5.2A
173. ANS: D PTS: 1 DIF: L2 REF: p. 257
OBJ: 9.1.2 Define a polyatomic ion and write the names and formulas of the most common polyatomic ions.
174. ANS: D PTS: 1 DIF: L1 REF: p. 354
OBJ: 12.1.1 Explain how balanced equations apply to both chemistry and everyday life.
STA: C5.2A
175. ANS: B PTS: 1 DIF: L1 REF: p. 188
OBJ: 7.1.1 Determine the number of valence electrons in an atom of a representative element.
176. ANS: D PTS: 1 DIF: L1 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. | 12.1.3 Identify the quantities that are always conserved in chemical reactions.
STA: C5.2A
177. ANS: B PTS: 1 DIF: L1 REF: p. 243
OBJ: 8.4.4 Identify the reason network solids have high melting points.
STA: C4.3c | C4.4a
178. ANS: D PTS: 1 DIF: L2 REF: p. 261 | p. 262
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
179. ANS: D PTS: 1 DIF: L1 REF: p. 261
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
180. ANS: B PTS: 1 DIF: L1 REF: p. 323
OBJ: 11.1.2 Describe how to write a skeleton equation
181. ANS: C PTS: 1 DIF: L2 REF: p. 295 | p. 296
OBJ: 10.1.4 Describe how the mass of a mole of a compound is calculated.
182. ANS: D PTS: 1 DIF: L1 REF: p. 336 | p. 337
OBJ: 11.2.2 Predict the products of the five general types of reactions.
STA: C5.6b
183. ANS: D PTS: 1 DIF: L1 REF: p. 327
OBJ: 11.1.3 Describe the steps for writing a balanced chemical equation.
STA: C5.2A

184. ANS: C PTS: 1 DIF: L2 REF: p. 371
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
185. ANS: D PTS: 1 DIF: L2 REF: p. 369
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
186. ANS: C PTS: 1 DIF: L1 REF: p. 188
OBJ: 7.1.1 Determine the number of valence electrons in an atom of a representative element.
187. ANS: C PTS: 1 DIF: L3 REF: p. 310
OBJ: 10.3.2 Interpret an empirical formula. STA: C4.1b
188. ANS: A PTS: 1 DIF: L1 REF: p. 290
OBJ: 10.1.2 Relate Avogadro's number to a mole of a substance.
STA: C4.6b
189. ANS: A PTS: 1 DIF: L2 REF: p. 371
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
190. ANS: B PTS: 1 DIF: L1 REF: p. 305
OBJ: 10.3.1 Describe how to calculate the percent by mass of an element in a compound.
STA: C4.1a
191. ANS: A PTS: 1 DIF: L2 REF: p. 295 | p. 296
OBJ: 10.1.4 Describe how the mass of a mole of a compound is calculated.
192. ANS: C PTS: 1 DIF: L2 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. STA: C5.2A
193. ANS: C PTS: 1 DIF: L2 REF: p. 371
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
194. ANS: A PTS: 1 DIF: L2 REF: p. 334 | p. 335
OBJ: 11.2.1 Describe the five general types of reactions.
195. ANS: D PTS: 1 DIF: L1 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. STA: C5.2A
196. ANS: B PTS: 1 DIF: L1 REF: p. 324
OBJ: 11.1.1 Describe how to write a word equation.
197. ANS: B PTS: 1 DIF: L2 REF: p. 188 | p. 189
OBJ: 7.1.1 Determine the number of valence electrons in an atom of a representative element.
198. ANS: B PTS: 1 DIF: L2 REF: p. 360 | p. 361 | p. 362
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
199. ANS: A PTS: 1 DIF: L1 REF: p. 327
OBJ: 11.1.3 Describe the steps for writing a balanced chemical equation.
STA: C5.2A

200. ANS: B PTS: 1 DIF: L2 REF: p. 231
OBJ: 8.3.1 Describe the relationship between atomic and molecular orbitals.
STA: C4.8h
201. ANS: C PTS: 1 DIF: L2 REF: p. 363 | p. 364 | p. 365 | p. 366
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
202. ANS: A PTS: 1 DIF: L2 REF: p. 323
OBJ: 11.1.2 Describe how to write a skeleton equation
203. ANS: B PTS: 1 DIF: L3 REF: p. 257 | p. 264
OBJ: 9.1.2 Define a polyatomic ion and write the names and formulas of the most common polyatomic ions. | 9.2.2 Apply the rules for naming and writing formulas for compounds with polyatomic ions. STA: C4.2d | C4.2c
204. ANS: A PTS: 1 DIF: L2 REF: p. 371
OBJ: 12.3.1 Identify and use the limiting reagent in a reaction to calculate the maximum amount of product(s) produced and the amount of excess reagent that remains unreacted.
STA: C5.2e
205. ANS: C PTS: 1 DIF: L2 REF: p. 291 | p. 292
OBJ: 10.1.2 Relate Avogadro's number to a mole of a substance.
STA: C4.6b
206. ANS: D PTS: 1 DIF: L1 REF: p. 359 | p. 360
OBJ: 12.2.1 Construct mole ratios from balanced chemical equations and apply these ratios in mole-mole stoichiometric calculations.
207. ANS: A PTS: 1 DIF: L1 REF: p. 194
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
208. ANS: C PTS: 1 DIF: L1 REF: p. 334 | p. 335
OBJ: 11.2.2 Predict the products of the five general types of reactions.
STA: C5.6b
209. ANS: C PTS: 1 DIF: L2 REF: p. 299
OBJ: 10.2.1 Describe how to convert the mass of a substance to the number of moles of a substance, and moles to mass. STA: C4.6a
210. ANS: C PTS: 1 DIF: L1 REF: p. 327 | p. 328
OBJ: 11.1.3 Describe the steps for writing a balanced chemical equation.
STA: C5.2A
211. ANS: D PTS: 1 DIF: L2 REF: p. 291 | p. 292
OBJ: 10.1.2 Relate Avogadro's number to a mole of a substance.
STA: C4.6b
212. ANS: C PTS: 1 DIF: L2 REF: p. 375
OBJ: 12.3.2 Calculate theoretical yield, actual yield, or percent yield given appropriate information.
213. ANS: C PTS: 1 DIF: L2 REF: p. 254 | p. 257
OBJ: 9.1.1 Identify the charges of monatomic ions by using the periodic table, and name the ions. | 9.1.2 Define a polyatomic ion and write the names and formulas of the most common polyatomic ions.
STA: C4.9A
214. ANS: C PTS: 1 DIF: L1 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. STA: C5.2A
215. ANS: C PTS: 1 DIF: L1 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. STA: C5.2A

216. ANS: B PTS: 1 DIF: L2 REF: p. 363 | p. 364 | p. 365 | p. 366
OBJ: 12.2.2 Calculate stoichiometric quantities from balanced chemical equations using units of moles, mass, representative particles, and volumes of gases at STP. STA: C5.2d | C5.2f
217. ANS: C PTS: 1 DIF: L2 REF: p. 332
OBJ: 11.2.1 Describe the five general types of reactions.
218. ANS: B PTS: 1 DIF: L2 REF: p. 192 | p. 195
OBJ: 7.2.1 Explain the electrical charge of an ionic compound.
219. ANS: D PTS: 1 DIF: L1 REF: p. 372
OBJ: 12.3.2 Calculate theoretical yield, actual yield, or percent yield given appropriate information.
220. ANS: D PTS: 1 DIF: L2 REF: p. 336 | p. 337
OBJ: 11.2.1 Describe the five general types of reactions.
221. ANS: B PTS: 1 DIF: L2 REF: p. 302
OBJ: 10.2.2 Identify the volume of a quantity of gas at STP.
222. ANS: D PTS: 1 DIF: L2 REF: p. 291 | p. 292
OBJ: 10.1.2 Relate Avogadro's number to a mole of a substance.
STA: C4.6b
223. ANS: A PTS: 1 DIF: L1 REF: p. 262 | p. 263
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
224. ANS: A PTS: 1 DIF: L2 REF: p. 374
OBJ: 12.3.2 Calculate theoretical yield, actual yield, or percent yield given appropriate information.
225. ANS: B PTS: 1 DIF: L2 REF: p. 359 | p. 360
OBJ: 12.2.1 Construct mole ratios from balanced chemical equations and apply these ratios in mole-mole stoichiometric calculations.
226. ANS: C PTS: 1 DIF: L2 REF: p. 262
OBJ: 9.2.1 Apply the rules for naming and writing formulas for binary ionic compounds.
STA: C4.2A | C4.2B | C5.5B
227. ANS: B PTS: 1 DIF: L1 REF: p. 356
OBJ: 12.1.2 Interpret balanced chemical equations in terms of interacting moles, representative particles, masses, and gas volume at STP. STA: C5.2A