

Chemistry Practice Quiz Answers

| Isotope Name | Symbol | Atomic Number | Atomic Mass | # Protons | # Neutrons | # Electrons |
|--------------|------------------|---------------|-------------|-----------|------------|-------------|
| Carbon-14 | ^{14}C | 6 | 14 | 6 | 8 | 6 |
| Hydrogen-3 | ^3H | 1 | 3 | 1 | 2 | 1 |
| Chlorine- 37 | ^{37}Cl | 17 | 37 | 17 | 20 | 17 |
| Bromine- 80 | ^{80}Br | 35 | 80 | 35 | 45 | 35 |

Conversions:

1. Find the mass in

a) 1.22 mol sodium

$$1.22 \text{ mol Na} \times \frac{23 \text{ g Na}}{1 \text{ mol Na}} = 28.06 \text{ g Na}$$

b) 14.5 mol copper

$$14.5 \text{ mol Cu} \times \frac{63.5 \text{ g Cu}}{1 \text{ mol Cu}} = 920.8 \text{ g Cu}$$

2. Find the number of moles in:

a) 16 g S

$$16 \text{ g S} \times \frac{1 \text{ mol}}{32.1 \text{ g}} = .5 \text{ mol S}$$

b) 1.2044×10^{24} atoms Na

$$1.2044 \times 10^{24} \text{ atoms Na} \times \frac{1 \text{ mol Na}}{6.022 \times 10^{23} \text{ atoms Na}} = 2 \text{ mol Na}$$

3. Find the mass (g) in:

a) 6.022×10^{24} atoms of tantalum

$$6.022 \times 10^{24} \text{ atoms of Ta} \times \frac{1 \text{ mol Ta}}{6.022 \times 10^{23} \text{ atoms}} = 10 \text{ mol Ta}$$

$$10 \text{ mol Ta} \times \frac{180.9 \text{ g Ta}}{1 \text{ mol Ta}} = 1809 \text{ g Ta}$$

b) 3.01×10^{21} atoms of cobalt

4. Find the number of atoms in:

a) 54 g Al

$$54 \text{ g Al} \times \frac{1 \text{ mol Al}}{27 \text{ g Al}} = 2 \text{ mol Al}$$

$$2 \text{ mol Al} \times \frac{6.022 \times 10^{23} \text{ atoms Al}}{1 \text{ mol Al}} = 1.2044 \times 10^{24} \text{ atoms Al}$$

b) .697 g Ga

Pre-AP Atomic Theory Practice Quiz [Answer Strip]

ID: A

- D 8. B 19. B 27. D 28.
- A 9. C 20. A 29.
- C 10. A 30.
- D 11. A 24. A 31.
- A 12. C 32.
- A 13. B 33.
- A 2. B 14. A 21. D 34.
- C 3. A 15. B 22. A 35.
- C 4. D 16. C 23. C 36.
- C 5. C 17. C 37.
- A 6. D 18. A 25. A 38.
- C 7.

Pre-AP Atomic Theory Practice Quiz [Answer Strip]

ID: A

- C 39. B 49. C 59. D 69. A 79.
- A 40. C 50. C 60. B 70. B 80.
- D 41. B 51. B 61. D 71. A 82.
- C 42. D 52. A 62. A 72. B 83.
- D 43. B 53. D 63. B 73. D 84.
- C 44. D 54. B 64. B 74. B 85.
- B 45. A 55. B 65. C 75. A 86.
- B 46. B 56. C 66. D 76. C 87.
- C 47. A 57. D 67. B 77. C 88.
- C 48. C 58. A 68. C 78. A 89.

Pre-AP Atomic Theory Practice Quiz [Answer Strip]

ID: A

- B 90. C 102. C 113. C 124. B 136.
- D 91. C 103. B 114. C 125. D 137.
- D 92. B 104. B 115. B 126. A 138.
- A 93. D 105. D 116. D 127. C 139.
- B 94. B 117. B 128. C 140.
- D 95. A 106. A 118. A 129. B 141.
- B 96. B 107. C 119. A 130. C 142.
- A 97. B 108. C 120. A 131. B 143.
- C 98. B 109. A 121. A 132. A 144.
- B 99. C 110. A 122. D 133. B 145.
- A 100. A 111. A 123. C 134. B 146.
- B 101. C 112. C 135. B 146.

Pre-AP Atomic Theory Practice Quiz [Answer Strip]

ID: A

- C 147. B 159. A 171. C 182. C 192.
- B 148. C 160. B 172. C 193.
- B 149. C 161. B 173. D 183. B 194.
- D 150. C 162. B 174. A 184. A 195.
- A 151. A 175. B 185. C 196.
- D 152. C 163. A 176. C 186.
- D 153. C 164. D 177. C 187.
- B 154. C 165. D 178. C 188.
- B 155. B 166. B 178. C 188.
- C 156. D 167. C 179. D 189.
- C 157. D 168. A 180. A 190.
- D 158. C 169. A 181. C 191.
- C 170.