

Chapt 10 Molar Conversions Practice test

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ___ 1. How many atoms are in 3.5 moles of arsenic atoms?
- 5.8×10^{23} atoms
 - 7.5×10^{23} atoms
 - 2.1×10^{23} atoms
 - 1.7×10^{23} atoms

Use the following information to answer the next question:

An average bushel of apples has a mass of 10 kg and contains 5 dozen apples.

- ___ 2. What would be the average mass of 6 apples?
- 1.0 kg
 - 4.0 kg
 - 0.50 kg
 - 2.0 kg
- ___ 3. What is the number of moles in 432 g $\text{Ba}(\text{NO}_3)_2$?
- 0.237 mol
 - 0.605 mol
 - 1.65 mol
 - 3.66 mol
- ___ 4. What is the number of moles of beryllium atoms in 36 g of Be?
- 0.25 mol
 - 4.0 mol
 - 45.0 mol
 - 320 mol
- ___ 5. How many moles of CaBr_2 are in 5.0 grams of CaBr_2 ?
- 2.5×10^{-2} mol
 - 4.2×10^{-2} mol
 - 4.0×10^{-2} mol
 - 1.0×10^{-2} mol
- ___ 6. What is the mass of silver in 3.4 g AgNO_3 ?
- 0.025 g
 - 0.64 g
 - 2.2 g
 - 3.0 g
- ___ 7. What is the mass of oxygen in 250 g of sulfuric acid, H_2SO_4 ?
- 0.65 g
 - 3.9 g
 - 16 g
 - 160 g

- ___ 8. What information is needed to calculate the percent composition of a compound?
- the weight of the sample to be analyzed and its density
 - the weight of the sample to be analyzed and its molar volume
 - the formula of the compound and the atomic mass of its elements
 - the formula of the compound and its density
- ___ 9. What is the percent composition of carbon, in heptane, C_7H_{16} ?
- 12%
 - 19%
 - 68%
 - 84%
- ___ 10. What is the percent by mass of carbon in acetone, C_3H_6O ?
- 20.7%
 - 62.1%
 - 1.61%
 - 30.0%
- ___ 11. What mass of sucrose, $C_{12}H_{22}O_{11}$, is needed to make 500.0 mL of a 0.200M solution?
- 34.2 g
 - 100 g
 - 17.1 g
 - 68.4 g
- ___ 12. How many mL of a 2.0M NaBr solution are needed to make 200.0 mL of 0.50M NaBr?
- 25 mL
 - 50 mL
 - 100 mL
 - 150 mL

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Answer Section

MULTIPLE CHOICE

1. ANS: C PTS: 1 DIF: L2 REF: p. 311
OBJ: 10.1.2 Explain how chemists count the number of atoms, molecules, or formula units in a substance.
BLM: analysis
2. ANS: A PTS: 1 DIF: L3 REF: p. 306 | p. 307
OBJ: 10.1.1 Convert among the count, mass, and volume of something.
BLM: analysis
3. ANS: C PTS: 1 DIF: L2 REF: p. 315 | p. 319
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. BLM: analysis
4. ANS: B PTS: 1 DIF: L2 REF: p. 317 | p. 319
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. BLM: analysis
5. ANS: A PTS: 1 DIF: L2 REF: p. 317 | p. 319
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. BLM: analysis
6. ANS: C PTS: 1 DIF: L3 REF: p. 318 | p. 319
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. BLM: analysis
7. ANS: D PTS: 1 DIF: L3 REF: p. 318 | p. 319
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. BLM: analysis
8. ANS: C PTS: 1 DIF: L2 REF: p. 327
OBJ: 10.3.1 Calculate the percent by mass of an element in a compound.
BLM: comprehension
9. ANS: D PTS: 1 DIF: L2 REF: p. 327
OBJ: 10.3.1 Calculate the percent by mass of an element in a compound.
BLM: analysis
10. ANS: B PTS: 1 DIF: L2 REF: p. 327
OBJ: 10.3.1 Calculate the percent by mass of an element in a compound.
BLM: analysis
11. ANS: A PTS: 1 DIF: L3 REF: p. 526
OBJ: 16.2.1 Calculate the molarity of a solution. BLM: analysis
12. ANS: B PTS: 1 DIF: L2 REF: p. 528 | p. 529
OBJ: 16.2.2 Describe the effect of dilution on the total moles of solute in solution.
BLM: analysis