

Name: _____

Date: _____ Per: _____

Chemistry
Assessment #21: Concentration of Solutions PRACTICE

For each of the following questions or statements, select the most appropriate response and write its letter on the answer line:

- _____ 1. What is the concentration of a sodium chloride solution prepared by dissolving 0.159 moles of NaCl in sufficient water to give 350 mL of solution?
A. 0.16 M
B. 0.45 M
C. 18 M
D. 27 M
- _____ 2. What is the molarity of an aqueous solution containing 22.5 g of sucrose ($C_{12}H_{22}O_{11}$) in 35.5 mL of solution?
A. 0.0657 M
B. 0.104 M
C. 1.85 M
D. 3.52 M
- _____ 3. How many grams of NaOH are there in 500.0 mL of a 0.175 M NaOH solution?
A. 2.19×10^{-3} g
B. 3.50 g
C. 14.0 g
D. 114 g
- _____ 4. How many grams of H_3PO_4 are in 175 mL of a 3.5 M solution of H_3PO_4 ?
A. 0.61 g
B. 4.9 g
C. 20. g
D. 60. g
- _____ 5. What is the concentration of an aqueous methanol solution produced when 0.200 L of a 2.00 M solution was diluted to 0.800 L?
A. 0.200 M
B. 0.400 M
C. 0.500 M
D. 0.800 M

- _____ 6. What volume of a concentrated solution of potassium hydroxide (6.00 M) must be diluted to 200. mL to make a 0.880 M solution of potassium hydroxide?
- A. 26.4 mL
 - B. 29.3 mL
 - C. 50.0 mL
 - D. 176 mL
- _____ 7. What is the molarity of a solution prepared by diluting 43.72 mL of 5.005 M aqueous $K_2Cr_2O_7$ to 500. mL?
- A. 0.0044 M
 - B. 0.0879 M
 - C. 0.438 M
 - D. 0.870 M
- _____ 8. A solution contains 28% phosphoric acid by mass. This means that:
- A. 1 mL of this solution contains 28 g of phosphoric acid
 - B. 1 L of this solution has a mass of 28 g
 - C. 100 mL of this solution contains 28 g of phosphoric acid
 - D. 1 L of this solution contains 28 mL of phosphoric acid
- _____ 9. What is the concentration in % (m/v) of a NaCl solution prepared by dissolving 9.3 g of NaCl in sufficient water to give 350 mL of solution?
- A. 0.455% (m/v)
 - B. 2.66% (m/v)
 - C. 3.26% (m/v)
 - D. 37.6% (m/v)
- _____ 10. As more salt is dissolved in water, what will happen to the boiling point of that solution?
- A. it will decrease
 - B. it will stay the same
 - C. it will increase
 - D. it will not be measurable

Answers:

1. B
2. C
3. B
4. D
5. C
6. B
7. C
8. C
9. B
10. C