

Test Bank for Chemistry in Focus 7th Tro

Chapter 02

1. The result of an addition or subtraction should have the same number of decimal places as the quantity carrying the _____.

- a. the most precise number
- b. the least precise number
- c. highest number of significant figures
- d. least number of significant figures
- e. highest decimal numbers

ANSWER: b

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 5:03 AM

2. The result of a multiplication or division should carry the same number of significant digits as the factor with the _____.

- a. the most precise number
- b. the least precise number
- c. highest number of significant figures
- d. least number of significant figures
- e. highest decimal numbers

ANSWER: d

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 5:06 AM

3. How many significant figures are there in the number 10.00?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 0

ANSWER: d

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Measurement

Chapter 02

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 5:23 AM

4. How many significant figures are there in the number 10,100?

- a. 1
- b. 3
- c. 4
- d. 5
- e. 0

ANSWER: b

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 5:25 AM

5. Determine the density of a 50.0 g sample of mercury having a volume of 3.66 mL. Carry out the calculation to the correct number of significant digits.

- a. 13.66 g/mL
- b. 13.7 mL
- c. 183 g/mL
- d. 0.0732 g/mL
- e. 0.073 g/mL

ANSWER: b

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Density: A Measure of Compactness

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 5:27 AM

6. Determine the density of a 100.0 g sample of mercury having a volume of 7.36 cm³. Carry out the calculation to the correct number of significant digits.

- a. 13.58 g/cm³
- b. 13.66 g/cm³
- c. 183 g/cm³
- d. 0.0732 g/cm³
- e. 0.073 g/cm³

ANSWER: a

POINTS: 1

Chapter 02

DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Density: A Measure of Compactness
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 5:34 AM

7. Determine the mass in grams of a gold sample that occupies a volume of 16.39 mL? Gold has a density of 19.3 g/mL.

- a. 0.118 g
- b. 0.316 g
- c. 0.849 g
- d. 1.18 g
- e. 316 g

ANSWER: e
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Density: A Measure of Compactness
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 5:35 AM

8. Determine the volume occupied by 1.5 g of ethyl alcohol. The density of ethyl alcohol is 0.789 g/mL.

- a. 1.9 mL
- b. 1.3 mL
- c. 0.53 mL
- d. 0.526 mL
- e. 1.331 mL

ANSWER: a
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Density: A Measure of Compactness
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 4/3/2014 7:50 AM

9. Chloroform is a commonly used anesthetic with a density of 1.483 g/mL. Determine the volume of chloroform needed to administer a 9.37 g sample of the anesthetic.

- a. 0.158 g
- b. 6.32 g
- c. 13.9 g
- d. 13.89 g
- e. 0.0632 g

Chapter 02

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Density: A Measure of Compactness
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 5:42 AM

10. If 15.0 mL of a metal has a mass of 103.0 g, what is the density of the metal?

- a. 6.87 g/mL
- b. 1550 g/ mL
- c. 0.146 g/mL
- d. 1.46 g/mL
- e. 9.867 g/mL

ANSWER: a
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Density: A Measure of Compactness
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 5:44 AM

11. The density of gold is 19.3 g/mL. If the current price of gold is \$56.75 per gram, what is the volume of a nugget of gold worth \$150.00?

- a. 1.15 mL
- b. 0.868 mL
- c. 1.72 mL
- d. 1.27 mL
- e. 0.137 mL

ANSWER: e
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Density: A Measure of Compactness
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 4/3/2014 7:50 AM

12. What is the standard SI unit for mass?

- a. Gram
- b. Pound
- c. Ounce

Chapter 02

d. Kilogram

e. Ton

ANSWER: d

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Units in Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 5:46 AM

13. What is the standard SI unit for length?

a. Meter

b. Feet

c. Mile

d. Kilometer

e. Centimeter

ANSWER: a

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Units in Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 5:48 AM

14. What is the correct SI unit for time?

a. Millisecond

b. Hour

c. Second

d. Minute

e. Microsecond

ANSWER: c

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Units in Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 5:49 AM

15. Which of these represents the SI prefix for micro (μ)?

a. 10^{-6}

b. 10^{-3}

Chapter 02

- c. 10^{-9}
- d. 10^{-2}
- e. 10^6

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Units in Measurement
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 4/3/2014 7:50 AM

16. Which of these represents the SI prefix for centi (c)?

- a. 10^{-6}
- b. 10^{-3}
- c. 10^{-1}
- d. 10^{-2}
- e. 102

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Units in Measurement
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 5:51 AM

17. Which of these represents the SI prefix for mega (M)?

- a. 10^9
- b. 10^6
- c. 10^3
- d. 10^{-2}
- e. 10^{-6}

ANSWER: b
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Units in Measurement
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 4/3/2014 7:50 AM

Chapter 02

18. The diameter of the nucleus of an atom is approximately 1×10^{-13} m. If 1 nm is equal to $10 \text{ \AA}$, what is the diameter of the nucleus in $\text{\AA}$? (1 nm = 1×10^{-9} m)

- a. $1 \times 10^{-21} \text{ \AA}$
- b. $1 \times 10^{-6} \text{ \AA}$
- c. $1 \times 10^{-5} \text{ \AA}$
- d. $1 \times 10^{-4} \text{ \AA}$
- e. $1 \times 10^{-3} \text{ \AA}$

ANSWER: e
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Units in Measurement
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 6:30 AM

19. Convert 89.5 m to millimeters.

- a. $8.95 \times 10^4 \text{ mm}$
- b. $8.95 \times 10^{-4} \text{ mm}$
- c. $8.95 \times 10^2 \text{ mm}$
- d. $8.95 \times 10^{-2} \text{ mm}$
- e. $8.95 \times 10^5 \text{ mm}$

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Units in Measurement
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 6:32 AM

20. Which of the following is not true?

- a. 1 cm = .01 m
- b. 100 cm = 1 m
- c. 1 cm = 100m
- d. .01 cm = .0001m
- e. 10000 cm = 100 m

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice

Chapter 02

HAS VARIABLES: False

TOPICS: Units in Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 4/24/2015 6:27 AM

21. Given that 1 in = 2.54 cm, which of the following is true?

a. $1 \text{ in}^2 = 2.54 \text{ cm}^2$

b. $1 \text{ in}^2 = 5.08 \text{ cm}^2$

c. $1 \text{ in}^2 = 6.45 \text{ cm}^2$

d. $1 \text{ in}^2 = 1.27 \text{ cm}^2$

e. $1 \text{ in}^2 = 10.16 \text{ cm}^2$

ANSWER: c

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 6:36 AM

22. One m^3 equals _____.

a. 1000 mm^3

b. $1,000,000 \text{ mm}^3$

c. $1,000,000,000 \text{ mm}^3$

d. $1,000,000,000,000 \text{ mm}^3$

e. $1,000,000,000,000,000 \text{ mm}^3$

ANSWER: c

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 6:49 AM

23. One milliliter is equal to _____.

a. 2.54 cubic inches

b. 1000 liters

c. 1 cubic centimeter

d. 16.39 cubic inches

e. 0.6214 cubic inches

ANSWER: c

Chapter 02

POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Converting Between Units
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 6:51 AM

24. One in³ equals _____.

- a. 2.54 cm³
- b. 7.62 cm³
- c. 16.38 cm³
- d. 0.394 cm³
- e. 3.94 cm³

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Converting Between Units
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/24/2018 8:53 AM

25. The long jump record is 8.90 m. What is the length in inches? (1 m = 39.37 in)

- a. 9.73 in
- b. 293 in
- c. 350 in
- d. 4204 in
- e. 5000 in

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Converting Between Units
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 6:57 AM

26. The long jump record is 8.90 m. What is the length in yards? (1 yd = 0.9144 m)

- a. 9.73 yd
- b. 293 yd
- c. 350 yd
- d. 4204 yd

Chapter 02

e. 5000 yd

ANSWER: a

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 7:08 AM

27. A football field is 100.0 yd long. What is its length in meters? (1 yd = 0.9144 m)

a. 0.09144 m

b. 91.44 m

c. 274.32 m

d. 334 m

e. 9.144×10^3 m

ANSWER: b

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 7:09 AM

28. A football field is 100 yd long. What is its length in centimeters? (1 yd = 0.9144 m)

a. 0.09144 cm

b. 91.44 cm

c. 274.32 cm

d. 334 cm

e. 9.144×10^3 cm

ANSWER: e

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 7:17 AM

29. How many kilograms of calcium are there in 173 lb of calcium? (1 lb = 454 g)

a. 1.1 kg

b. 78.54 kg

Chapter 02

- c. 1.1×10^2 kg
- d. 3.8×10^4 kg
- e. 7.85×10^4 kg

ANSWER: b
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Converting Between Units
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 7:24 AM

30. Most races are now measured in kilometers. What is the distance in miles a runner must complete in a 10-kilometer run? (1 km = 0.62137 mile)

- a. 3.1 miles
- b. 6.2 miles
- c. 16.1 miles
- d. 32.2 miles
- e. 62.137 miles

ANSWER: b
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Converting Between Units
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 7:25 AM

31. Convert 2.50×10^4 meters to miles. (1 km = 0.62137 mile)

- a. 76.2 miles
- b. 6.35 miles
- c. 15.5 miles
- d. 155 miles
- e. 186 miles

ANSWER: c
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Converting Between Units
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/22/2018 7:26 AM

Chapter 02

32. Convert 10.5 mm/s to ft/hr.

- a. 124 ft/hr
- b. 9.57×10^{-6} ft/hr
- c. .0344 ft/hr
- d. 37800 ft/hr
- e. 0.125 ft/hr

ANSWER: a

POINTS: 1

DIFFICULTY: Difficult

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 7:28 AM

33. Which among the following has the most number of significant figures?

- a. 0.5071
- b. 0.201
- c. 6.02×10^{23}
- d. 51
- e. 103

ANSWER: a

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Units in Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 7:29 AM

34. Solve the problem.

$3.728 + 6.272 = \underline{\hspace{2cm}}$

- a. 10
- b. 10.0
- c. 10.00
- d. 10.000
- e. 10.0000

ANSWER: d

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

Chapter 02

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 7:30 AM

35. Solve the problem.

$$3.72 \times 10^8 \times 9.26 \times 10^{-3} = \underline{\hspace{2cm}}$$

- a. 3.44×10^6
- b. 4.02×10^{10}
- c. 3.45×10^5
- d. 3.44×10^{-4}
- e. 4.02×10^{-10}

ANSWER: a

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 7:32 AM

36. Solve the problem.

$$1.5 \times 10^3 + 3.14 \times 10^4 - 1.21 \times 10^2 = \underline{\hspace{2cm}}$$

- a. 3.28×10^4
- b. 3.30×10^3
- c. 3.3×10^{-4}
- d. 3.30×10^5
- e. 3.43×10^9

ANSWER: a

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/22/2018 7:35 AM

37. Solve the problem.

$$(5.46 \times 10^7 + 3.13 \times 10^6) \times (7.65 \times 10^5) = \underline{\hspace{2cm}}$$

- a. 65.7×10^{18}
- b. 130.7×10^{18}

Chapter 02

c. 4.42×10^{13}

d. 2.39×10^{12}

e. 65.7×10^8

ANSWER: c

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 7:48 AM

38. Solve the problem.

$(3.21 \times 10^{10} - 3.13 \times 10^{12}) \div (7.65 \times 10^5) = \underline{\hspace{2cm}}$

a. 4.13×10^6

b. 2.37×10^{18}

c. 65.7×10^{18}

d. -23.7×10^{17}

e. -4.04×10^6

ANSWER: e

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 7:48 AM

39. Solve the problem.

$(12.67 \times 4.23) \div 23.42 = \underline{\hspace{2cm}}$

a. 2.3587

b. 2.6334

c. 2.2289

d. 2.8800

e. 2.2884

ANSWER: e

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

Chapter 02

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 7:50 AM

40. Which among the following is an equivalent of 0.01%?

- a. 100 ppm
- b. 100 ppb
- c. 0.000001 ppm
- d. 0.000001 ppb
- e. 0.0001 ppm

ANSWER: a

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Reading Graphs

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 7:51 AM

41. Which of these is the correct scientific notation for 6,000,220?

- a. 6.022×10^5
- b. 6.00022×10^5
- c. 6.00022×10^6
- d. 6.00022×10^{-5}
- e. 6.00022×10^{-6}

ANSWER: c

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Scientific Notation

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 7:53 AM

42. Which of the following is correctly written using scientific notation?

- a. 50.0×10^6
- b. 4.02×10^{216}
- c. $1 \times 10^{-6.8}$
- d. $1.005 \times 10^{-9.05}$
- e. 10^{-5}

ANSWER: b

POINTS: 1

DIFFICULTY: Moderate

Chapter 02

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Scientific Notation

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 7:54 AM

43. Which of these is **incorrect**?

a. centi (c) = 10^{-2}

b. mega (M) = 10^6

c. milli (m) = 10^{-3}

d. nano (n) = 10^9

e. micro (μ) = 10^{-6}

ANSWER: d

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

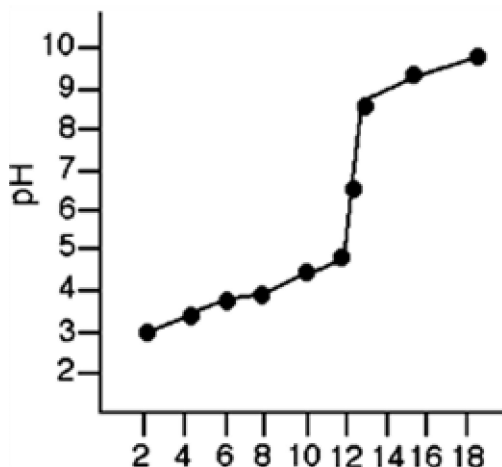
HAS VARIABLES: False

TOPICS: Units in Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 7:58 AM

Figure 2-1



44. Refer to Figure 2-1. What is the pH of the solution after 8 mL of the base has been added?

a. 3

b. 4

c. 6

d. 7

e. 8

ANSWER: b

POINTS: 1

DIFFICULTY: Easy

Chapter 02

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

PREFACE NAME: Figure 2-1

TOPICS: Reading Graphs

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:00 AM

45. Refer to Figure 2-1. What was the effect on the pH of the solution when the volume of the base was increased from 8 mL to 13 mL?

- a. The pH dropped by a value of 4.
- b. The pH increased by a value of 4.
- c. The pH remained relatively unchanged.
- d. The pH increased by a value of 10.
- e. The pH increased by a value of 20.

ANSWER: b

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

PREFACE NAME: Figure 2-1

TOPICS: Reading Graphs

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:02 AM

46. Refer to Figure 2-1. Which of these statements is **true** based on the data provided by the graph?

- a. The pH of the solution must be determined algebraically.
- b. The pH of the solution is relatively unaffected by the addition of the base.
- c. The pH of the solution is 7 when approximately 16 mL of the base has been added.
- d. The pH of the solution is relatively constant after the addition of the first 14 mL of the base.
- e. The pH of the solution rises significantly when the volume of the base is increased from 14 mL to 18 mL.

ANSWER: e

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

PREFACE NAME: Figure 2-1

TOPICS: Reading Graphs

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:05 AM

47. Which of these numbers has four significant figures?

- a. 0.3211
- b. 0.201
- c. 6.02×10^{23}

Chapter 02

d. 510

e. 0.0103

ANSWER: a

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Measurement

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:07 AM

48. Solve the problem.

$$131.7 \times 1.05 = \underline{\hspace{2cm}}$$

a. 1.38×10^3

b. 1.38×10^2

c. 1.3×10^3

d. 1.3×10^3

e. 1.3×10^{-3}

ANSWER: b

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:08 AM

49. Solve the problem.

$$33.5 \div 3.011 = \underline{\hspace{2cm}}$$

a. 1.11×10^1

b. 1.11×10^3

c. 1.113×10^1

d. 1.11×10^2

e. 1.112587×10^1

ANSWER: a

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

Chapter 02

DATE MODIFIED: 1/23/2018 8:09 AM

50. Which of these is the correct normal decimal notation for 5.23×10^{-4} ?

- a. 0.0523
- b. 0.00523
- c. 0.0000523
- d. 0.000523
- e. 52,300

ANSWER: d

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Scientific Notation

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 4/3/2014 7:50 AM

51. Which of these is the correct normal notation for 7.77×10^7 ?

- a. 0.000000777
- b. 0.0777
- c. 7,770
- d. 7,770,000
- e. 77,700,000

ANSWER: e

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Scientific Notation

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 4/3/2014 7:50 AM

52. Which of these is the correct normal notation for 8.14×10^5 ?

- a. 0.0000814
- b. 0.000814
- c. 81.400
- d. 814,000
- e. 81,400,000

ANSWER: d

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

Chapter 02

TOPICS: Scientific Notation
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:12 AM

53. Which of these series provides the correct ascending order of values given?

- I. 100 cm
 - II. 1 km
 - III. 10 m
 - IV. 100,000 mm
- a. $I < II < III < IV$
 - b. $II < I < IV < III$
 - c. $I < II = III < IV$
 - d. $I < IV < III < II$
 - e. $I < III < IV < II$

ANSWER: e
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Units in Measurement
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:14 AM

54. Which of these series correctly orders the values given from smallest to largest?

- I. 0.001 Mg
 - II. 2,000,000 ng
 - III. 1 Gg
 - IV. 100,000 cg
- a. $III < II < I < IV$
 - b. $II < I < IV < III$
 - c. $II < I = IV < III$
 - d. $I < IV = III < II$
 - e. $I < III < IV < II$

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Units in Measurement
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 4/24/2015 6:21 AM

55. Because of the high heat and humidity in the summer in Death Valley, California, a hiker requires about one quart of water for every two miles traveled on foot. If the density of water is 0.999 g/mL at 45°C, how many kilograms of water are required for a person to walk 30 kilometers in Death Valley? (1 L = 1.0567 qt; 1 km = 0.62317 miles)

Chapter 02

- a. 8.8 kg
- b. 70 kg
- c. 350 kg
- d. 700 kg
- e. 8.8×10^3 kg

ANSWER: a
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Problem Solving
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:16 AM

56. A sample of molten iron occupies a volume of 7.11×10^{-3} L. If the density of iron is 7.86 g/cm^3 , what is the mass of iron in grams in the sample?

- a. 0.000904 g
- b. 0.0559 g
- c. 0.904 g
- d. 1.105 g
- e. 55.8846 g

ANSWER: e
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Problem Solving
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:18 AM

57. An irregularly shaped piece of metal with a mass of 220 g was placed in a graduated cylinder that contained 35.00 mL of water. This raised the water level to 52.50 mL. What is the density of the metal?

- a. 0.285 g/mL
- b. 4.19 g/mL
- c. 17.5 g/mL
- d. 12.6 g/mL
- e. 38.5 g/mL

ANSWER: d
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Problem Solving
DATE CREATED: 4/3/2014 7:50 AM

Chapter 02

DATE MODIFIED: 1/23/2018 8:19 AM

58. An irregularly shaped piece of metal with a mass of 105 g was placed in a graduated cylinder that contained 25.00 mL of water. This raised the water level to 45.35 mL. What is the density of the metal?

- a. 0.238 g/mL
- b. 2.3 g/mL
- c. 4.2 g/mL
- d. 5.16 g/mL
- e. 20.35 g/mL

ANSWER: d

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:20 AM

59. Convert 4.5 inches to **meters**. (2.54 cm = 1 inch)

- a. 0.1143 m
- b. 1.77 m
- c. 11.43 m
- d. 0.0177 m
- e. 1143 m

ANSWER: a

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 4/3/2014 7:50 AM

60. Determine the volume in liters of a 1.00-ounce bottle. (1.06 qt = 1 L; 32 ounces = 1 qt)

- a. 0.0295 L
- b. 0.03125 L
- c. 0.03313 L
- d. 30.2 L
- e. 33.9 L

ANSWER: a

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

Chapter 02

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:23 AM

61. A regulation soccer field is 110.0 yards in length. Calculate the length in millimeters. (1.094 yards = 1 m)

- a. 0.101 mm
- b. 1.01 mm
- c. 100.5 mm
- d. 1.01×10^4 mm
- e. 1.01×10^5 mm

ANSWER: e

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 4/3/2014 7:50 AM

62. A 5 ft 7 in track athlete weighs 110 pounds. What is her height in cm and her weight in kilograms? (2.54 cm = 1 inch; 454 g = 1 pound)

- a. 14.5 cm and 242 kg
- b. 152 cm and 49.9 kg
- c. 170 cm and 49.9 kg
- d. 154 cm and 242 kg
- e. 152 cm and 4.99×10^4 kg

ANSWER: c

POINTS: 1

DIFFICULTY: Moderate

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Converting Between Units

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:25 AM

63. Chemical waste is often shipped in 55-gallon drums. What is the weight in pounds of a 55-gallon drum if the density of the waste is 1.5942 g/cm^3 ? (454 g = 1 pound; $0.9463 \text{ L} = 1 \text{ quart}$; 4 quarts = 1 gallon)

- a. 130 lbs
- b. 731 lbs
- c. 810 lbs
- d. 4.5×10^4 lbs
- e. 5.9×10^4 lbs

ANSWER: b

Chapter 02

POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Converting Between Units
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 4/24/2015 6:13 AM

64. Solve the problem.

$$5.6 \times 10^2 \times 7.41 \times 10^3 = \underline{\hspace{2cm}}$$

- a. 232×10^1
- b. 7.55×10^5
- c. 2.32×10^5
- d. 4.1×10^6
- e. 232×10^5

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Problem Solving
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:27 AM

65. What is the mass in kilograms of a 25.00-pound dumbbell? (454 g = 1 pound)

- a. 1.377×10^{-3} kg
- b. 1.377 kg
- c. 11.35 kg
- d. 1.377×10^3 kg
- e. 1.135×10^7 kg

ANSWER: c
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Converting Between Units
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:28 AM

66. An international group of zookeepers with successful breeding programs made the following animal exchanges last year. Using the same bartering system, how many monkeys can a zoo obtain in exchange for 15 flamingos?

Chapter 02

3 oryxes = 1 tiger
1 camel = 6 anteaters
1 rhino = 4 monkeys
3 monkeys = 1 tiger
2 flamingos = 1 anteater
5 lemurs = 1 rhino
3 lemurs = 1 camel
1 rhino = 4 oryxes

- a. 3 monkeys
- b. 5 monkeys
- c. 8 monkeys
- d. 12 monkeys
- e. 15 monkeys

ANSWER: a
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Problem Solving
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 4/3/2014 7:50 AM

67. Which of these samples of aluminum will occupy the greatest volume? (Density of aluminum = 2.70 g/cm^3 ; 454 g = 1 pound)

- a. 10,000 g
- b. 25 pounds
- c. 1 kg
- d. $5 \times 10^{-2} \text{ L}$
- e. 2,000 mL

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Problem Solving
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:30 AM

68. Which of these samples of water will have the greatest mass? (Density of water = 1.00 g/cm^3 ; 454 g = 1 pound)

- a. 10,000 g
- b. 25 pounds
- c. 1 kg
- d. $5 \times 10^{-2} \text{ L}$
- e. 2,000 mL

ANSWER: b
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice

Chapter 02

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:30 AM

69. Solve the following equation for y:

$$3y + 24 = 6y - 3$$

- a. 3
- b. 6
- c. 9
- d. 8
- e. 12

ANSWER: c

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:32 AM

70. Solve the following equation for y:

$$3y = 24$$

- a. 3
- b. 6
- c. 7
- d. 8
- e. 12

ANSWER: d

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Problem Solving

DATE CREATED: 4/3/2014 7:50 AM

DATE MODIFIED: 1/23/2018 8:33 AM

71. Solve the following equation for z:

$$2(z + 6) - 10 = 42$$

- a. 6
- b. 10
- c. 12
- d. 20

Chapter 02

e. 40

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Problem Solving
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:34 AM

72. Solve the following equation for z:

$$4z \div 2z + 3 = 30$$

- a. 2
- b. 6.25
- c. 10
- d. 11
- e. 13.5

ANSWER: e
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Problem Solving
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:36 AM

73. Solve the following equation for x: $13x = x + 156$.

- a. 13
- b. 20
- c. 1
- d. 7
- e. 12

ANSWER: a
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Problem Solving
DATE CREATED: 4/3/2014 7:50 AM
DATE MODIFIED: 1/23/2018 8:37 AM

74. The _____ of a substance is a measure of how much of its mass is in a given amount of space.

- a. volume
- b. density

Chapter 02

- c. weight
- d. force
- e. resistance

ANSWER: b
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Density: A Measure of Compactness
DATE CREATED: 1/23/2018 8:37 AM
DATE MODIFIED: 1/23/2018 9:04 AM

75. The equivalent of 1 m is _____.

- a. 3.54 in
- b. 5.6 in
- c. 2.5 in
- d. 39.37 in
- e. 31.35 in

ANSWER: d
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Converting Between Units
DATE CREATED: 1/23/2018 8:52 AM
DATE MODIFIED: 1/23/2018 8:54 AM

76. The equivalent of 31456 g is _____.

- a. 3.1456×10^{-3} mg
- b. 3.1456×10^{-3} kg
- c. 31.456×10^3 kg
- d. 314.56 mg
- e. 3.1456×10^1 kg

ANSWER: e
POINTS: 1
DIFFICULTY: Moderate
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
TOPICS: Scientific Notation
DATE CREATED: 1/23/2018 8:54 AM
DATE MODIFIED: 1/24/2018 8:52 AM

77. The SI unit of temperature is _____.

Chapter 02

- a. kelvin
- b. fahrenheit
- c. celsius
- d. rankine
- e. newton

ANSWER: a

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Units in Measurement

DATE CREATED: 1/23/2018 8:56 AM

DATE MODIFIED: 1/23/2018 8:57 AM

78. Identify the non-significant term in 0.5467.

- a. 0
- b. 5
- c. 4
- d. 6
- e. 7

ANSWER: a

POINTS: 1

DIFFICULTY: Easy

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

TOPICS: Measurement

DATE CREATED: 1/23/2018 8:58 AM

DATE MODIFIED: 1/23/2018 8:59 AM