General, Organic, and Biological Chemistry, 4e **(Timberlake)**
Chapter 1 Chemistry and Measurements

1.1 Multiple-Choice Questions

1) The branch of chemistry that is the study of compounds containing carbon is called
A) organic chemistry
B) geochemistry
C) physical chemistry
D) biochemistry
E) general chemistry
Answer: A
Objective: 1.1
Global Outcomes: GO2

2) The branch of chemistry that is the study of the composition, properties, and reactions of matter is called
A) organic chemistry
B) geochemistry
C) physical chemistry
D) biological chemistry
E) general chemistry
Answer: E
Objective: 1.1
Global Outcomes: GO5

3) The branch of chemistry that is the study of the reactions that take place in biological systems is called
A) organic chemistry
B) geochemistry
C) physical chemistry
D) biological chemistry
E) general chemistry
Answer: D
Objective: 1.1
Global Outcomes: GO5

4) Which of the following is not a chemical?
A) salt
B) sound
C) sugar
D) zinc
E) silver
Answer: B
Objective: 1.1
Global Outcomes: GO2

5) Titanium dioxide is a chemical used in toothpaste to _____.
A) make the paste white
B) disinfect the toothbrush
C) keep the paste from spoiling
D) remove plaque
E) strengthen tooth enamel
Answer: A
Objective: 1.1
Global Outcomes: GO2

6) Which of the following is a chemical?
A) sugar
B) heat
C) light
D) noise
E) a wave
Answer: A
Objective: 1.1

7) In this list, which substance can be classified as a chemical?
A) salt
B) sleep
C) cold
D) heat
E) temperature
Answer: A
Objective: 1.1
Global Outcomes: GO2

8) Which of the following would not be part of a study plan to learn chemistry?
A) study a little every day
B) skip your instructor's office hours
C) form a study group
D) read the chapter before class
E) work the sample problems
Answer: B
Objective: 1.2

9) One way to enhance your learning in chemistry is to _____.
A) study a little every day
B) form a study group
C) go to office hours
D) be an active learner
E) all the above
Answer: E
Objective: 1.2

10) In order to enhance your learning in chemistry, you should not _____.
A) study a little every day
B) form a study group
C) go to office hours
D) be an active learner
E) wait until the night before the exam to study
Answer: E
Objective: 1.2

11) The metric base unit for length is the
A) meter
B) inch
C) millimeter
D) kilometer
E) foot
Answer: A
Objective: 1.3
Global Outcomes: GO7

12) The metric unit for volume is the
A) meter
B) quart
C) liter
D) pint
E) centimeter
Answer: C
Objective: 1.3
Global Outcomes: GO7

13) Which of the following is the basic unit of mass in the SI?
A) pound
B) kilogram
C) milligram
D) microgram
E) gram
Answer: B
Objective: 1.3
Global Outcomes: GO2

14) Which of the following is a measurement of mass in the metric system?
A) milliliter
B) centimeter
C) kilogram
D) Celsius
E) meter
Answer: C
Objective: 1.3
Global Outcomes: GO2

15) Which of the following is a measurement of mass in the metric system?
A) oz
B) lb
C) Celsius
D) kilogram
E) meter
Answer: D
Objective: 1.3
Global Outcomes: GO2

16) A value of 25 °C is a measurement of
A) distance.
B) volume.
C) temperature.
D) mass.
E) density.
Answer: C
Objective: 1.3
Global Outcomes: GO2

17) A value of 36 mL is a measure of
A) density
B) mass
C) temperature
D) volume
E) distance
Answer: D
Objective: 1.3
Global Outcomes: GO2

18) A value of 345 mm is a measure of
A) density
B) mass
C) temperature
D) volume
E) distance
Answer: E
Objective: 1.3
Global Outcomes: GO2

19) The amount of space occupied by a substance is its
A) mass.
B) density.
C) weight.
D) length.
E) volume.
Answer: E
Objective: 1.3
Global Outcomes: GO2

20) The measurement of the gravitational pull on an object is its
A) volume.
B) weight.
C) mass.
D) length.
E) size.
Answer: B
Objective: 1.3
Global Outcomes: GO2

21) The measurement 0.000 0043 m, expressed correctly using scientific notation, is
A) 4.3×10^{-7} m.
B) 4.3×10^{-6} m.
C) 4.3×10^{6} m.
D) 0.43×10^{-5} m.
E) 4.3 m.
Answer: B
Objective: 1.4
Global Outcomes: GO4

22) The number 680 000 000 expressed correctly using scientific notation is
A) $6.8\ 10^{-7}$.
B) 0.68×10^{6}.
C) 6.8×10^{8}.
D) 68×10^{7}.
E) 680×10^{6}.
Answer: C
Objective: 1.4
Global Outcomes: GO4

23) Which of the following numbers is the smallest?
A) 4.0×10^{-6}
B) 4.0×10^{-8}
C) 4.0×10^{-2}
D) 4.0×10^{15}
E) 4.0×10^{-12}
Answer: E
Objective: 1.4
Global Outcomes: GO4

24) Which of the following numbers is the largest?
A) 2.05×10^{3}
B) 2.05×10^{-12}
C) 2.05×10^{5}
D) 2.05×10^{8}
E) 2.05
Answer: D
Objective: 1.4
Global Outcomes: GO2

25) Which of the following has the smallest mass?
A) 4.0×10^{-6} g
B) 4.0×10^{9} ng
C) 4.0×10^{-2} μg
D) 4.0×10^{-3} kg
E) 4.0×10^{-6} mm
Answer: C
Objective: 1.4, 1.7
Global Outcomes: GO2

26) Which of the following conversion factors is a measured number?
A) 10 cm/dm
B) 12 in/ft
C) 16 oz/lb
D) 25 miles/gallon
E) 12 eggs/dozen
Answer: D
Objective: 1.5, 1.8
Global Outcomes: GO3

27) Significant figures are important because they indicate
A) the accuracy of a measurement.
B) the number of digits on a calculator.
C) the number of measurements.
D) the precision of a measurement.
E) the accuracy of the conversion factor.
Answer: D
Objective: 1.5
Global Outcomes: GO2

28) Which of the following measurements has three significant figures?
A) 0.005 m
B) 510 m
C) 0.510 m
D) 0.051 m
E) 5100 m
Answer: C
Objective: 1.5
Global Outcomes: GO2

29) Which of the following numbers contains the designated CORRECT number of significant figures?
A) 0.04300 5 significant figures
B) 0.00302 2 significant figures
C) 156 000 3 significant figures
D) 1.04 2 significant figures
E) 3.0650 4 significant figures
Answer: C
Objective: 1.5
Global Outcomes: GO2

30) The number of significant figures in the measurement of 45.030 mm is
A) none.
B) three.
C) four.
D) five.
E) six.
Answer: D
Objective: 1.5
Global Outcomes: GO4

31) How many significant figures are in the number 0.00208?
A) six
B) two
C) three
D) four
E) five
Answer: C
Objective: 1.5
Global Outcomes: GO4

32) Which of the following examples illustrates a number that is correctly rounded to three significant figures?
A) 4.05438 grams to 4.054 grams
B) 0.03954 grams to 0.040 grams
C) 103.692 grams to 103.7 grams
D) 109,526 grams to 109 500 grams
E) 20.0332 grams to 20.0 grams
Answer: E
Objective: 1.6
Global Outcomes: GO2

33) A calculator answer of 423.6059 must be rounded off to three significant figures. What answer is reported?
A) 423
B) 424
C) 420
D) 423.6
E) 423.7
Answer: B
Objective: 1.6
Global Outcomes: GO4

34) Which of the answers for the following conversions contains the correct number of significant figures?

A) $2.543 \text{ m} \times \frac{39.4 \text{ in}}{1 \text{ m}} = 100.1942 \text{ in}$

B) $2 \text{ L} \times \frac{1.06 \text{ qt}}{1 \text{ L}} = 2.12 \text{ qt}$

C) $24.95 \text{ min} \times \frac{1 \text{ hr}}{60 \text{ min}} = 0.4158 \text{ hr}$

D) $12.0 \text{ ft} \times \frac{12 \text{ in}}{1 \text{ ft}} \times \frac{2.54 \text{ cm}}{1 \text{ in}} = 370 \text{ cm}$

E) $24.0 \text{ kg} \times \frac{1 \text{ lb}}{2.20 \text{ kg}} = 11 \text{ lb}$

Answer: C
Objective: 1.6
Global Outcomes: GO2

35) What is the correct answer for the calculation of a volume (in mL) with measured numbers $\frac{28.58}{16 \text{ x } 8.02}$?

A) 0.22 mL
B) 0.223 mL
C) 57 mL
D) 14 mL
E) 14.3 mL
Answer: A
Objective: 1.6
Global Outcomes: GO4

36) A researcher needed three samples of sodium chloride solution, each with a volume of 0.03510 mL. The total volume needed should be reported as

A) 0.105 mL.
B) 0.0105 mL.
C) 0.10 mL.
D) 0.1053 mL.
E) 0.1100 mL.
Answer: D
Objective: 1.6
Global Outcomes: GO9

37) When 2610 + 11.7 + 0.22 are added, the answer to the correct number of decimal places is _____.
A) 2621.92
B) 2621.9
C) 2621
D) 2620
E) 2600
Answer: D
Objective: 1.6
Global Outcomes: GO4

38) What is the answer, with the correct number of significant figures, for this problem?

4.392 g + 102.40 g + 2.51 g =

A) 109.302 g
B) 109 g
C) 109.3 g
D) 109.30 g
E) 110 g
Answer: D
Objective: 1.6
Global Outcomes: GO4

39) The correct answer for the addition of 7.5 g + 2.26 g + 1.311 g + 2 g is
A) 13.071 g.
B) 13 g.
C) 13.0 g.
D) 10 g.
E) 13.1 g.
Answer: B
Objective: 1.6
Global Outcomes: GO4

40) 5.21 cm is the same distance as
A) 0.0521 m.
B) 52.1 dm.
C) 5.21 mm.
D) 0.00521 km.
E) 5210 m.
Answer: A
Objective: 1.7, 1.8, 1.9
Global Outcomes: GO2

41) How many centimeters are there in 57.0 in.?
A) 22 cm
B) 0.0445 cm
C) 145 cm
D) 22.4 cm
E) 140 cm
Answer: C
Objective: 1.7, 1.8, 1.9
Global Outcomes: GO3

42) Which of the following measurements are NOT equivalent?
A) 25 mg = 0.025 g
B) 183 L = 0.183 kL
C) 150. msec = 0.150 sec
D) 84 cm = 8.4 mm
E) 24 dL = 2.4 L
Answer: C
Objective: 1.7, 1.8, 1.9
Global Outcomes: GO2

43) In which of the following is the metric unit paired with its correct abbreviation?
A) microgram / mg
B) milliliter / mL
C) centimeter / km
D) kilogram / cg
E) gram / gm
Answer: B
Objective: 1.7
Global Outcomes: GO2

44) Which of the following is the largest unit?
A) millimeter
B) micrometer
C) meter
D) decimeter
E) kilometer
Answer: E
Objective: 1.7
Global Outcomes: GO2

45) What is the metric relationship between grams and micrograms?
A) 1 g = 100 μg
B) 1 g = 1 000 000 μg
C) 1 g = 0.000 001 μg
D) 1 g = 1000 μg
E) 1 g = 0.001 μg
Answer: B
Objective: 1.8
Global Outcomes: GO2

46) What is the conversion factor for the relationship between millimeters and centimeters?
A) 1 mm/1 cm
B) 10 mm/1 cm
C) 1 cm/1 mm
D) 100 mm/1 cm
E) 10 cm/1 mm
Answer: B
Objective: 1.8
Global Outcomes: GO1

47) Which of the following is the smallest unit?
A) gram
B) milligram
C) kilogram
D) decigram
E) microgram
Answer: E
Objective: 1.8
Global Outcomes: GO7

48) The cubic centimeter (cm^3 or cc) has the same volume as a
A) cubic inch.
B) cubic liter.
C) milliliter.
D) centimeter.
E) cubic decimeter.
Answer: C
Objective: 1.8
Global Outcomes: GO7

49) 9.31 g is the same mass as
A) 931 μg.
B) 931 kg.
C) 93.1 cg.
D) 9310 mg.
E) 0.0931 dg.
Answer: D
Objective: 1.8, 1.9
Global Outcomes: GO7

50) According to the United States Food and Drug Administration, the recommended daily requirement of protein is 44 g. This is _____ of protein.
A) 1248.5 oz
B) 320 000 oz
C) 1.6 oz
D) 0.0605 oz
E) 150 000 oz
Answer: C
Objective: 1.8, 1.9
Global Outcomes: GO4

51) Which of the following setups would convert centimeters to feet?
A) $\text{cm} \times \frac{2.54\ \text{in.}}{1\ \text{cm}} \times \frac{1\ \text{ft}}{12\ \text{in.}}$
B) $\text{cm} \times \frac{2.54\ \text{cm}}{1\ \text{in.}} \times \frac{12\ \text{in.}}{1\ \text{ft}}$
C) $\text{cm} \times \frac{1\ \text{in.}}{2.54\ \text{cm}} \times \frac{1\ \text{ft}}{12\ \text{in.}}$
D) $\text{cm} \times \frac{1\ \text{in.}}{2.54\ \text{cm}} \times \frac{12\ \text{in.}}{1\ \text{ft}}$
E) $\text{cm} \times \frac{2.54\ \text{in.}}{1\ \text{cm}} \times \frac{1\ \text{ft}}{12\ \text{in.}}$
Answer: C
Objective: 1.8
Global Outcomes: GO2

52) A conversion factor set up correctly to convert 15 inches to centimeters is
A) 100 cm/1 m.
B) 1 inch/2.54 cm.
C) 1 cm/10 mm.
D) 2.54 cm/1 inch.
E) 10 cm/1 inch.
Answer: D
Objective: 1.8
Global Outcomes: GO2

53) The EPA limit for lead in the soil of play areas is 400 ppm. This is the same as

A) 400 mg lead in each gram of soil.
B) 400 g lead in each kilogram of soil.
C) 400 mg lead in each kilogram of soil.
D) 400 µg lead in each kilogram of soil.
E) 400 µg lead in each milligram of soil.
Answer: C
Objective: 1.8
Global Outcomes: GO3

54) How many pounds are in 3.5 kg?
A) 7.7 lb
B) 1.59 lb
C) 0.629 lb
D) 1.6 lb
E) 7.70 lb
Answer: A
Objective: 1.8, 1.9
Global Outcomes: GO4

55) How many kilograms are in 30.4 lb?
A) 13.8 kg
B) 14 kg
C) 67 kg
D) 66.88 kg
E) 66.9 kg
Answer: A
Objective: 1.8, 1.9
Global Outcomes: GO4

56) How many liters of soft drink are there in 5.25 qt?
A) 4950 L
B) 55.7 L
C) 4.95 L
D) 5.57 L
E) 5.0 L
Answer: C
Objective: 1.8, 1.9
Global Outcomes: GO4

57) What is 6.5 m converted to inches?
A) 1700 in
B) 1651 in
C) 39 in
D) 260 in
E) 255.9 in
Answer: D
Objective: 1.8, 1.9
Global Outcomes: GO4

58) 1.00 pint of milk has a volume of how many milliliters? (2 pints = 1 quart)
A) 472 mL
B) 530. mL
C) 1000 mL
D) 1890 mL
E) 106 mL
Answer: A
Objective: 1.8, 1.9
Global Outcomes: GO4

59) What is the volume of a cube that measures 4.00 cm on each side?
A) 16.0 mL
B) 64.0 L
C) 64.0 mL
D) 64.00 mL
E) 0.640 L
Answer: C
Objective: 1.8, 1.9
Global Outcomes: GO4

60) Carrots are $0.79 per pound. What is the cost of 1.20 kg of carrots?
A) $2.10
B) $0.43
C) $1.45
D) $0.79
E) $0.95
Answer: A
Objective: 1.8, 1.9
Global Outcomes: GO4

61) A driver is traveling at 60 km/h. Is the driver speeding if the speed limit is 45 mph?
A) Yes
B) No
Answer: B
Objective: 1.8, 1.9
Global Outcomes: GO2

62) How many kilograms are in 30.4 lb?
A) 13.8 kg
B) 14 kg
C) 67 kg
D) 66.88 kg
E) 66.9 kg
Answer: A
Objective: 1.8, 1.9
Global Outcomes: GO4

63) A dose of aspirin of 5.0 mg per kilogram of body weight has been prescribed to reduce the fever of an infant weighing 8.5 pounds. The number of milligrams of aspirin that should be administered is
A) 19 mg.
B) 53 mg.
C) 1.6 mg.
D) 5.0 mg.
E) 0.59 mg.
Answer: A
Objective: 1.8, 1.9
Global Outcomes: GO2

64) A doctor's order is 0.125 g of ampicillin. The liquid suspension on hand contains 250 mg/5.0 mL. How many milliliters of the suspension are required?
A) 0.0025 mL
B) 3.0 mL
C) 2.5 mL
D) 6.3 mL
E) 0.0063 mL
Answer: C
Objective: 1.10
Global Outcomes: GO4

65) A nugget of gold with a mass of 521 g is added to 50.0 mL of water. The water level rises to a volume of 77.0 mL. What is the density of the gold?
A) 10.4 g/mL
B) 6.77 g/mL
C) 1.00 g/mL
D) 0.0518 g/mL
E) 19.3 g/mL
Answer: E
Objective: 1.10
Global Outcomes: GO4

66) Which one of the following substances will float in gasoline, which has a density of 0.66 g/mL?
A) table salt (density = 2.16 g/mL)
B) balsa wood (density = 0.16 g/mL)
C) sugar (density = 1.59 g/mL)
D) aluminum (density = 2.70 g/mL)
E) mercury (density = 13.6 g/mL)
Answer: B
Objective: 1.10
Global Outcomes: GO9

67) What is the mass of 2.00 L of an intravenous glucose solution with a density of 1.15 g/mL?
A) 0.023 kg
B) 2.30 kg
C) 1.15 kg
D) 0.015 kg
E) 0.58 kg
Answer: B
Objective: 1.10
Global Outcomes: GO3

68) Mercury has a specific gravity of 13.6. How many milliliters of mercury have a mass of 0.35 kg?
A) 0.0257 mL
B) 0.026 mL
C) 25.7 mL
D) 26 mL
E) 4760 mL
Answer: D
Objective: 1.10
Global Outcomes: GO4

69) What is the density of a substance with a mass of 45.00 g and a volume of 26.4 mL?
A) 1.70 g/mL
B) 1.7 g/mL
C) 0.59 g/mL
D) 0.587 g/mL
E) 45.0 g/mL
Answer: A
Objective: 1.10
Global Outcomes: GO4

70) A liquid has a volume of 34.6 mL and a mass of 46.0 g. What is the density of the liquid?
A) 1.00 g/mL
B) 1.33 g/mL
C) 0.752 g/mL
D) 1330 g/mL
E) 0.663 g/mL
Answer: B
Objective: 1.10
Global Outcomes: GO4

71) What is the mass of 53 mL of ethanol, which has a density of 0.79 g/mL?
A) 67.1 g
B) 41.9 g
C) 42 g
D) 67 g
E) 53 g
Answer: C
Objective: 1.10
Global Outcomes: GO4

72) The density of a solution is 1.18 g/mL. Its specific gravity is
A) 11.8.
B) 0.118.
C) 0.847.
D) 1.18.
E) 1.2.
Answer: D
Objective: 1.10
Global Outcomes: GO4

73) The specific gravity of a solution is 1.18. Its density is
A) 11.8 g/mL.
B) 0.118 g/mL.
C) 0.847 g/mL.
D) 1.18 g/mL.
E) 1.2 g/mL.
Answer: D
Objective: 1.10
Global Outcomes: GO2

74) Diamond has a density of 3.52 g/mL. What is the volume in cubic centimeters of a diamond with a mass of 15.1 g?
A) 4.3 cm^3
B) 4.29 cm^3
C) 0.233 cm^3
D) 53 cm^3
E) 53.2 cm^3
Answer: B
Objective: 1.10
Global Outcomes: GO4

75) The ratio of the mass of a substance to its volume is its
A) specific gravity.
B) density.
C) buoyancy.
D) weight.
E) conversion factor.
Answer: B
Objective: 1.10
Global Outcomes: GO7

76) Which of the following is often used to determine an individual's percentage of body fat?
A) temperature
B) height
C) weight loss
D) weight gain
E) density
Answer: E
Objective: 1.10
Global Outcomes: GO2

77) A 50.0 mL urine sample has a mass of 50.7 g. The specific gravity of the urine is
A) 1.014 g/mL.
B) 0.986 g/L.
C) 1.01.
D) 0.986.
E) 50.7.
Answer: C
Objective: 1.10
Global Outcomes: GO4

1.2 Short Answer Questions

Round off each of the following to three significant figures.

1) 504.85
Answer: 505
Objective: 1.5
Global Outcomes: GO4

2) 8.3158
Answer: 8.32
Objective: 1.5
Global Outcomes: GO4

3) 25 225
Answer: 25,200
Objective: 1.5
Global Outcomes: GO4

4) 58.5422
Answer: 58.5
Objective: 1.5
Global Outcomes: GO4

5) 6.3477×10^4
Answer: 6.35×10^4
Objective: 1.5
Global Outcomes: GO4

6) 399870
Answer: 4.00×10^5
Objective: 1.5
Global Outcomes: GO4

7) 0.003 408 8
Answer: 0.00341
Objective: 1.5
Global Outcomes: GO4

Express each of the following numbers using scientific notation.

8) 351 000 000 000
Answer: 3.51×10^{11}
Objective: 1.4
Global Outcomes: GO4

9) 0.000 860
Answer: 8.60×10^{-4}
Objective: 1.4
Global Outcomes: GO4

10) 5 207 000
Answer: 5.207×10^{6}
Objective: 1.4
Global Outcomes: GO4

11) 0.000 000 050
Answer: 5.0×10^{-8}
Objective: 1.4
Global Outcomes: GO4

12) 0.705 m
Answer: 7.05×10^{-1} m
Objective: 1.4
Global Outcomes: GO4

State the number of significant figures in each of the following measurements.

13) 0.008090 cm
Answer: 4
Objective: 1.5
Global Outcomes: GO4

14) 680 000 km
Answer: 2
Objective: 1.5
Global Outcomes: GO4

15) 28.050 km
Answer: 5
Objective: 1.5
Global Outcomes: GO4

16) 0.0005 L
Answer: 1
Objective: 1.5
Global Outcomes: GO4

17) 75.00 m
Answer: 4
Objective: 1.5
Global Outcomes: GO4

18) 2.043×10^{4} mm
Answer: 4
Objective: 1.5
Global Outcomes: GO4

19) 6.1×10^{-5} mL
Answer: 2
Objective: 1.5
Global Outcomes: GO3

20) 9.00×10^{6} g
Answer: 3
Objective: 1.5
Global Outcomes: GO4

21) Any material used in or produced by a chemical reaction is a _____.
Answer: chemical
Objective: 1.1
Global Outcomes: GO2

1.3 Matching Questions

Are the numbers in each of the following statements measured or exact?

A) exact
B) measured

1) In the U.S. system there are 5280 feet in one mile.
Objective: 1.5
Global Outcomes: GO2

2) The patient's blood sugar level is 350 mg/dL.
Objective: 1.5
Global Outcomes: GO2

3) There are 452 pages in a book.
Objective: 1.5
Global Outcomes: GO2

4) The rabbit weighs 2.5 pounds.
Objective: 1.5
Global Outcomes: GO2

5) There are 100 capsules in the bottle.
Objective: 1.5
Global Outcomes: GO2

6) I lost 14 pounds on my diet last month.
Objective: 1.5
Global Outcomes: GO2

7) 1 liter is equal to 1.06 quarts.
Objective: 1.5

8) The patient's temperature is 100.1 °F.
Objective: 1.5
Global Outcomes: GO2

Answers: 1) A 2) B 3) A 4) B 5) A 6) B 7) B 8) B

Match the type of measurement to the unit given below.

A) mass
B) volume
C) distance
D) temperature
E) density

9) milliliter
Objective: 1.3
Global Outcomes: GO2

10) mm
Objective: 1.3
Global Outcomes: GO2

11) gram
Objective: 1.3
Global Outcomes: GO2

12) 125 K
Objective: 1.3
Global Outcomes: GO2

13) kilometer
Objective: 1.3
Global Outcomes: GO2

14) milligram
Objective: 1.3
Global Outcomes: GO2

Answers: 9) B 10) C 11) A 12) D 13) C 14) A

Select the correct prefix to complete the equality.

A) 1000
B) 10
C) 1
D) 0.01
E) 1×10^{12}
F) 100
G) 0.001
H) 1×10^{12}
I) 1×10^{-12}
J) 0.1

15) 1 g = _____ kg
Objective: 1.7, 1.8
Global Outcomes: GO2

16) 1 m = _____ mm
Objective: 1.7, 1.8
Global Outcomes: GO2

17) 1 cm = _____ mm
Objective: 1.7, 1.8
Global Outcomes: GO2

18) 1 dL = _____ mL
Objective: 1.7, 1.8
Global Outcomes: GO2

19) 1 kg = _____ g
Objective: 1.7, 1.8
Global Outcomes: GO2

20) 1 pg = _____ g
Objective: 1.7, 1.8
Global Outcomes: GO2

21) 1 g = _____ pg
Objective: 1.7, 1.8
Global Outcomes: GO2

22) 1 mL = _____ cc
Objective: 1.7, 1.8
Global Outcomes: GO1

Answers: 15) G 16) A 17) B 18) F 19) A 20) I 21) E 22) C