Pool Canvas

Add, modify, and remove questions. Select a question type from the Add Question drop-down list and click **Go** to add questions. Use Creation Settings to establish which default options, such as feedback and images, are available for question creation.

Add [Calculated Formula] [GO]   Creation Settings

Name	Chapter 1 - Matter and Measurement
Description	Question pool for Chapter 1 - Matter and Measurement
Instructions	

Modify

◀ Add Question Here

Question 1	**Multiple Choice**	**0 points**	Modify	Remove

Question
Which is <u>not</u> an example of pure substance?

Answer
  Sugar
✓ Air
  Aluminum foil
  Water
  A block of dry ice

◀ Add Question Here

Question 2	**Multiple Choice**	**0 points**	Modify	Remove

Question
Which is an example of physical change?

Answer
  The rusting of an iron nail
  The burning of propane in a gas grill
  Baking cookies
  Polishing tarnished silver
✓ Melting of an ice cube in a glass of soda

◀ Add Question Here

Question 3	**Multiple Choice**	**0 points**	Modify	Remove

Question
Which measurement has the fewest number of significant figures?

Answer
  12.80 m
  0.1280 m
  0.001280 m
✓ 1280 m
  All of the measurements have the same number of significant figures.

◀ Add Question Here

Question 4	**Multiple Choice**	**0 points**	Modify	Remove

Question
Which quantity is an exact number?

Answer
✓ 3 cars
  1,000 m
  2 L
  453.6 g

◀ Add Question Here

Question 5	**Multiple Choice**	**0 points**	Modify	Remove

Question
The number 0.0079400 expressed correctly using scientific notation is

Answer
  0.007940.
  7.9400.
✓ 7.9400×10^{-3}.
  7.9400×10^{-4}.
  7.940×10^{-3}.

◀ Add Question Here

Question 6	**Multiple Choice**	**0 points**	Modify	Remove

Question
The measurement 66,580,100 expressed correctly using scientific notation is

Answer
  6.6580100×10^{7}.
  6.6580100×10^{-7}.
  6.7×10^{7}.
  6.65801×10^{-7}.
✓ 6.65801×10^{7}.

◀ Add Question Here

Question 7	**Multiple Choice**	**0 points**	Modify	Remove

Question

When 4.870×10^{-3} is correctly converted to its standard form the number becomes _____.

Answer

4870

4870.

0.00487

✔ 0.004870

0.0004870

| Question 8 | **Multiple Choice** | **0 points** | Modify | Remove |

Question
Which number is the largest?

Answer ✔ 4.38×10^3

4.38×10^2

4.38×10^{-3}

4.38×10^{-2}

438

| Question 9 | **Multiple Choice** | **0 points** | Modify | Remove |

Question
Which number is the smallest?

Answer 4.38×10^3

4.38×10^2

✔ 4.38×10^{-3}

4.38×10^{-2}

438

| Question 10 | **Multiple Choice** | **0 points** | Modify | Remove |

Question
When 0.091558 is correctly rounded to two significant figures the number becomes _____.

Answer

0.09

✔ 0.092

92

0.093

| Question 11 | **Multiple Choice** | **0 points** | Modify | Remove |

Question
When 5.5490×10^8 is correctly rounded to three significant figures the number becomes _____.

Answer

5.55

✔ 5.55×10^8

555

554

5.54×10^8

| Question 12 | **Multiple Choice** | **0 points** | Modify | Remove |

Question
Which number has four significant figures?

Answer ✔ 3.978

0.780

0.0085

1700

Two or more of the above numbers have four significant figures.

| Question 13 | **Multiple Choice** | **0 points** | Modify | Remove |

Question
What is the correct answer to this calculation, reported using the proper number of significant figures: 38.251 + 73.1?

Answer

111

111.3

✔ 111.4

111.35

111.351

| Question 14 | **Multiple Choice** | **0 points** | Modify | Remove |

Question
What is the correct answer to this calculation, reported using the proper number of significant figures: 610.348 + 7.09 + 96.9192 – 143.6?

Answer

      570.757

      570.7572

      570.76

✔ 570.8

      858.0

Question 15	**Multiple Choice**	**0 points**	Modify	Remove

Question

What is the correct answer to this calculation, reported using the proper number of significant figures: 26.927 × 62.2?

Answer

      1674.8594

      1674.86

✔ 1674.9

      1675.

      1.67×10^3

Question 16	**Multiple Choice**	**0 points**	Modify	Remove

Question

What is the correct answer for the following calculation, reported using the proper number of significant figures: $\dfrac{38.251 - 3.1}{5.555}$?

Answer

      6.3278

      6.328

✔ 6.33

      6.3

      3.8

Question 17	**Multiple Choice**	**0 points**	Modify	Remove

Question

What is the metric relationship between milliliters and microliters?

Answer

      1 milliliter = 1 microliter

      1,000 milliliters = 1 microliter

✔ 1 milliliter = 1,000 microliters

      1,000,000 milliliters = 1 microliter

      1 milliliter = 1,000,000 microliters

Question 18	**Multiple Choice**	**0 points**	Modify	Remove

Question

Which metric relationship is correct?

Answer

      1 milliliter = 1,000 liters

✔ 1 dL = 100 mL

      1,000 km = 1 m

      1,000,000 mg = 1 µg

      1 liter = 1,000,000 milliliters

Question 19	**Multiple Choice**	**0 points**	Modify	Remove

Question

Which is the proper conversion factor for converting pounds (lb) to grams (g)?

Answer

      $\dfrac{1\ \text{lb}}{454\ \text{g}}$

      $\dfrac{1\ \text{g}}{454\ \text{lb}}$

✔ $\dfrac{454\ \text{g}}{1\ \text{lb}}$

      $\dfrac{454\ \text{lb}}{1\ \text{g}}$

Question 20	**Multiple Choice**	**0 points**	Modify	Remove

Question

Which length is the longest?

Answer

      12 m

      12,000 mm

      12,000 µm

✔ 12,000 cm

      0.0012 km

Question 21	**Multiple Choice**	**0 points**	Modify	Remove

Question
What is the mass in kilograms of an individual who weighs 157 lb?

Answer
      157 kg

      7.10 kg

✔ 71.0 kg

      71 kg

      347 kg

Question 22	**Multiple Choice**	**0 points**	Modify	Remove

Question
In a balloon with a volume of 21.55 cups, what is the volume of this balloon in L?

Answer
      86.20 L

      81.32 L

      5.711 L

      5.388 L

✔ 5.083 L

Question 23	**Multiple Choice**	**0 points**	Modify	Remove

Question
225 mL is the same volume as

Answer ✔ 2.25×10^5 µL.

      2.25×10^2 µL.

      2.25 L.

      2.25×10^{-5} µL.

      0.225 µL.

Question 24	**Multiple Choice**	**0 points**	Modify	Remove

Question
If a package of nuts weighs 41.3 oz, what is the mass of package reported in milligrams?

Answer
      1.17 mg

      1.17×10^3 mg

✔ 1.17×10^6 mg

      1.45×10^3 mg

      3.00×10^5 mg

Question 25	**Multiple Choice**	**0 points**	Modify	Remove

Question
If a tree is 89.5 cm tall, what is the tree's height reported in yards?

Answer
✔ 0.979 yd

      6.31 yd

      18.9 yd

      35.2 yd

      227 yd

Question 26	**Multiple Choice**	**0 points**	Modify	Remove

Question
If honey has a density of 1.36 g/mL, what is the mass of 1.25 qt, reported in kilograms?

Answer
✔ 1.60 kg

      1.6×10^3 kg

      0.974 kg

      974 kg

      1.80 kg

Question 27	**Multiple Choice**	**0 points**	Modify	Remove

Question
If a piece of rock that has a volume of 0.73 L and a mass of 1524 g, what is the density of the rock in g/mL?

Answer
      2.1×10^3 g/mL

      0.48 g/mL

      4.8×10^{-4} g/mL

✔ 2.1 g/mL

      2.088 g/mL

Question 28	**Multiple Choice**	**0 points**	Modify	Remove

Question
A child had a body temperature of 101.8 °F. What is her body temperature in °C?

Answer

24.6 °C

✓ 38.8 °C

38.78 °C

56.56 °C

311.9 °C

◀ Add Question Here

| Question 29 | **Multiple Choice** | **0 points** | Modify | Remove |

Question

On a summer day the outdoor temperature in Washington, DC was 36.5 °C. What was this outdoor temperature in °F?

Answer

✓ 97.7 °F

98.0 °F

68.5 °F

65.7 °F

52.3 °F

◀ Add Question Here

| Question 30 | **Multiple Choice** | **0 points** | Modify | Remove |

Question

An oven is set for a temperature of 298 °F. What was the oven temperature in K?

Answer

166 K

✓ 421 K

148 K

571 K

439 K

◀ Add Question Here

| Question 31 | **Multiple Choice** | **0 points** | Modify | Remove |

Question

Which of the following temperatures is the highest?

Answer

✓ 32 °C

32 °F

32 K

◀ Add Question Here

| Question 32 | **Multiple Choice** | **0 points** | Modify | Remove |

Question

The recommended dietary allowance for calcium for teenage children is 1,300 mg per day.   If typical 8.0-fl oz glass of reduced-fat milk contains 298 mg of calcium, how many fluid ounces of milk does a teenager need to drink to get the entire recommended amount of calcium from this milk?

Answer

4.4 fl oz

1.8 fl oz

3.5 fl oz

✓ 35 fl oz

32 fl oz

◀ Add Question Here

| Question 33 | **Multiple Choice** | **0 points** | Modify | Remove |

Question

What is the density of a sample of rubbing alcohol if it has a specific gravity of 0.789?

Answer

1.27 g/mL

✓ 0.789 g/mL

1.00 g/mL

0.895 g/mL

◀ Add Question Here

| Question 34 | **Multiple Choice** | **0 points** | Modify | Remove |

Question

Which of the answers for the following conversions contains the correct answer and the number of significant figures?

Answer

$$3.779 \ \cancel{lb} \times \frac{454 \ \cancel{g}}{1 \ \cancel{lb}} \times \frac{1{,}000 \ mg}{1 \ \cancel{g}} = 1.7 \times 10^{6} \ mg$$

$$553 \ \cancel{dL} \times \frac{1 \ \cancel{L}}{10 \ \cancel{dL}} \times \frac{10^{3} \ mL}{1 \ \cancel{L}} = 5.5 \times 10^{4} \ mL$$

✓
$$623 \ \cancel{nm} \times \frac{1 \ \cancel{m}}{10^{9} \ \cancel{nm}} \times \frac{39.4 \ in}{1 \ \cancel{m}} = 2.45 \times 10^{-5} \ in$$

$$623 \ \cancel{nm} \times \frac{1 \ \cancel{m}}{10^{6} \ \cancel{nm}} \times \frac{39.4 \ in}{1 \ \cancel{m}} = 2.45 \times 10^{-2} \ in$$

◀ Add Question Here

| Question 35 | **Multiple Choice** | **0 points** | Modify | Remove |

Question

What is the mass in grams of 85.32 mL of blood plasma with a density of 1.03 g/mL?

Answer

85.32 mL

82.83 mL

82.8 mL

87.88 mL

✓ 87.9 mL

| Question 36 | **Multiple Choice** | **0 points** | Modify | Remove |

Question

If a 185-lb patient is prescribed 145 mg of the cholesterol-lowering drug Tricor daily, what dosage is the patient receiving in mg/kg of his body weight?

Answer

0.784 mg/kg

1.28 mg/kg

0.355 mg/kg

✓ 1.73 mg/kg

0.577 mg/kg

| Question 37 | **True/False** | **0 points** | Modify | Remove |

Question

PVC plastic, which is used in pipes, is an example of a synthetic material.

Answer

✓ True

False

| Question 38 | **True/False** | **0 points** | Modify | Remove |

Question

Nitrogen gas is an example of a compound.

Answer

True

✓ False

| Question 39 | **True/False** | **0 points** | Modify | Remove |

Question

The most common physical changes are changes in state.

Answer

✓ True

False

| Question 40 | **True/False** | **0 points** | Modify | Remove |

Question

A compound can not be broken down into simpler substances.
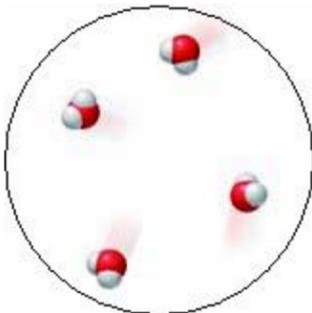
Answer

True

✓ False

| Question 41 | **True/False** | **0 points** | Modify | Remove |

Question

The water molecules in this image are best described as being in the liquid state.

Answer

True

✓ False

| Question 42 | **True/False** | **0 points** | Modify | Remove |

Question

The base unit for mass in the metric system is kilograms (kg).

Answer

True

✓ False

| Question 43 | **True/False** | **0 points** | Modify | Remove |

Question

The base unit for volume in the metric system is liter (L).

Answer

✓ True

False

| Question 44 | **True/False** | **0 points** | Modify | Remove |

Question

An inexact number results from a measurement or observation and contains some uncertainty.

Answer
✔ True
False

Question 45 | **True/False** | **0 points** | Modify | Remove

Question

A zero does count as a significant figure when it occurs at the end of a number that does not have a decimal point.

Answer
True
✔ False

Question 46 | **True/False** | **0 points** | Modify | Remove

Question

8 mL is larger than 8 dL.

Answer
True
✔ False

Question 47 | **True/False** | **0 points** | Modify | Remove

Question

Specific gravity is a quantity that compares the density of a substance with the density of water at 25 °C.

Answer
True
✔ False

Question 48 | **True/False** | **0 points** | Modify | Remove

Question

The specific gravity of a substance has units of g/mL.

Answer
True
✔ False

Question 49 | **True/False** | **0 points** | Modify | Remove

Question

When the liquid carbon tetrachloride (density = 1.59 g/mL) is added to water, the top layer will be the water layer.

Answer
✔ True
False

Question 50 | **True/False** | **0 points** | Modify | Remove

Question

When a piece of magnesium (density = 1.738 g/mL) is placed in a container of liquid carbon tetrachloride (density = 1.59 g/mL), the piece of magnesium will float on top of the carbon tetrachloride.

Answer
True
✔ False

Question 51 | **True/False** | **0 points** | Modify | Remove

Question

In reading a number with a decimal point from left to right, all digits starting with the first nonzero number are significant figures.

Answer
✔ True
False

Question 52 | **True/False** | **0 points** | Modify | Remove

Question

The number 900,027,300 has four significant figures.

Answer
True
✔ False

Question 53 | **True/False** | **0 points** | Modify | Remove

Question

The number 900,027,300 has nine significant figures.

Answer
True
✔ False

Question 54 | **True/False** | **0 points** | Modify | Remove

Question

Four conversion factors can be written using any equality relating two quantities.

Answer
True
✔ False

| Question 55 | **True/False** | **0 points** | |

Question
Dissolving sugar in water involves a chemical change.

Answer
    True
✔ False

| Question 56 | **True/False** | **0 points** | |

Question
One-thousand (1,000) ms is the same length of time as one (1) μs.

Answer
    True
✔ False

| Question 57 | **True/False** | **0 points** | |

Question
When multiplying 762.85 by 15 the answer should be reported with two significant figures.

Answer
✔ True
    False

| Question 58 | **True/False** | **0 points** | |

Question
When subtracting 15 from 762.85 the answer should be reported with two significant figures.

Answer
    True
✔ False

| Question 59 | **True/False** | **0 points** | |

Question
In scientific notation, a number is written as $y \times 10^x$, where x can be any positive or negative number or fraction.

Answer
    True
✔ False

| Question 60 | **True/False** | **0 points** | |

Question
If the density of a substance is greater than 1 g/mL, the volume of an object of this substance will be greater than the mass of this object.

Answer
    True
✔ False

| Question 61 | **True/False** | **0 points** | |

Question
Dividing a number by 10^5 is the same as multiplying a number by 10^{-5}.

Answer
✔ True
    False

| Question 62 | **True/False** | **0 points** | |

Question
The measurement 10.3 cm has more significant figures than the measurement 10.3 m.

Answer
    True
✔ False

| Question 63 | **True/False** | **0 points** | |

Question
The density of olive oil is greater at 200 °C than at 25 °C.

Answer
    True
✔ False

| Question 64 | **True/False** | **0 points** | |

Question
One Kelvin is the same size as one degree Celsius.

Answer
✔ True
    False

| Question 65 | **True/False** | **0 points** | |

Question
The temperature 60 °C is higher than 60 °F.

Answer
✔ True
False

Question 66 | **True/False** | **0 points** | Modify Remove

Question
The temperature – 60 °C is higher than – 60 °F.

Answer
True
✔ False

Question 67 | **True/False** | **0 points** | Modify Remove

Question
The temperature 60 °C is higher than 60 K.

Answer
✔ True
False

Question 68 | **True/False** | **0 points** | Modify Remove

Question
A pure substance is the same as a compound.

Answer
True
✔ False

Question 69 | **True/False** | **0 points** | Modify Remove

Question
In conversion factors the terms are always exact numbers.

Answer
True
✔ False

Question 70 | **True/False** | **0 points** | Modify Remove

Question
The number 87,927,000 is larger than the number 9.7×10^6.

Answer
✔ True
False

Question 71 | **True/False** | **0 points** | Modify Remove

Question
The number 0.0007270 is larger than the number 5.7×10^{-3}.

Answer
✔ True
False

Question 72 | **True/False** | **0 points** | Modify Remove

Question
A mixture can be separated into its components by physical changes.

Answer
✔ True
False

Question 73 | **Fill in the Blank** | **0 points** | Modify Remove

Question
A _____ change converts one material to another.

Answer
chemical

Question 74 | **Fill in the Blank** | **0 points** | Modify Remove

Question
The measurement 0.030500 m has _____ significant figures.

Answer
five

Question 75 | **Essay** | **0 points** | Modify Remove

Question
When the measurement 340,942 s is rounded to two significant figures, the value is properly reported as _____.

Answer
340,000 s or 3.4×10^5 s

Question 76 | **Fill in the Blank** | **0 points** | Modify Remove

Question

To use conversion factors to solve a problem, set up the problem with any unwanted unit in the numerator of one term and the _____ of another term, so that unwanted units cancel.

Answer   denominator

Question 77 | **Fill in the Blank**   **0 points**   Modify | Remove

Question

If you have equal masses of two different substances (A and B), and the density of A is twice the density of B, then the volume of A is _____ the volume of B.

Answer   one-half

Question 78 | **Fill in the Blank**   **0 points**   Modify | Remove

Question

Reporting the value of a measurement is meaningless without its _____.

Answer   unit

Question 79 | **Fill in the Blank**   **0 points**   Modify | Remove

Question

A small banana contains 323 mg of the nutrient potassium. You would need to eat _____ small bananas in one day to obtain the recommended daily intake of 3.5 g of potassium.

Answer   11

Question 80 | **Essay**   **0 points**   Modify | Remove

Question

The measurement 7947 nm is the same length as _____ cm, written in scientific notation.

Answer 7.947×10^{-4}

OK