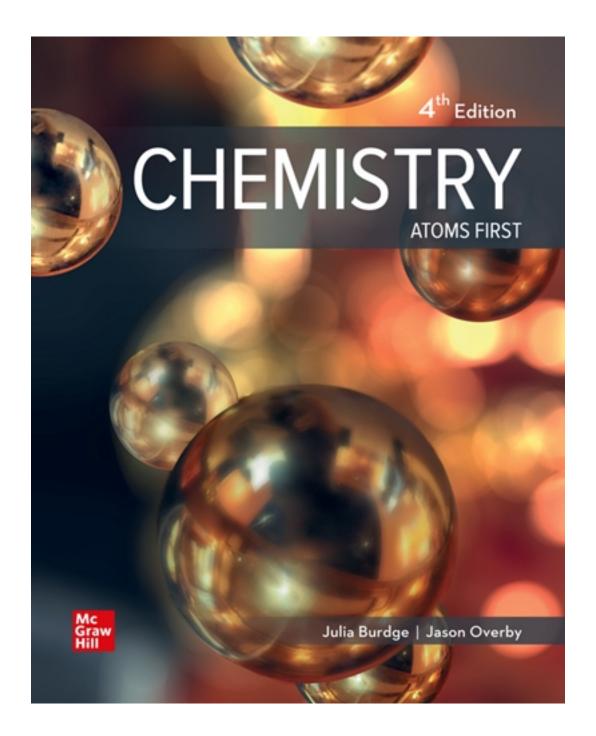
Test Bank for Chemistry Atoms First 4th Edition by Burdge

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# Test Bank

### ANSWERS ARE LOCATED IN THE SECOND PART OF THIS DOCUMENT

TRU	E/FAL	SE - Write 'T' if the statement is true and 'F' if the statement is false.	
1)	The r	ripening of fruit, once picked, is an example of physical change.	
			1)
	<b>o</b>	true	
	<u>o</u>	false	
Questi	on Detai	iils	
	ılty : Eas		
_	-	of Chemistry	
_	_	perties of Matter	
	's : 3. Ap	hemistry: The Science of Change	
_		Keyboard Navigation	
	·		
2)	When	n applying the scientific method, it is important to avoid any form of hypot	thesis.
			2)
	<b>o</b>	true	
	0	false	
	on Detai		
	ılty : Eas	sy entific Method	
_		of Chemistry	
-	's : 3. Ap	·	
	_	hemistry: The Science of Change	
Access	sibility : I	Keyboard Navigation	
<b>3)</b> data.	When	n applying the scientific method, a model or theory should be based on exp	perimenta
			3)
	0	true	

Version 1 1

0

false

**Question Details**Difficulty: Easy

Topic Bloom Chapte	: Study o l's : 3. Ap er : 01 Ch	ntific Method f Chemistry pply nemistry: The Science Keyboard Navigation	_				
4)	Matte	er is anything that	has mass and o	ccupies spac	ce.		
						4)	
	<b>o</b>	true					
	0	false					
Questi	ion Detai	ils					
-	ılty : Eas						
_	-	f Chemistry					
	's : 4. An	-					
_	_	erties of Matter sification and States of	of Matter				
•		nemistry: The Science					
_		Keyboard Navigation	-				
5)	The d	lensity of a substa	nce is an intens	ive property	•	5)	
	<b>o</b>	true					
	<u></u>	false					
Onogti	ion Detai	lla.					
_	ılty : Eas						
	-	f Chemistry					
Bloom	's : 4. An	alyze					
_	_	erties of Matter					
		sification and States of					
		nemistry: The Science Keyboard Navigation					
. 10003		in in the second of the second					
6)	The v	volume of a substa	ance is an intens	sive property	<i>'</i> .		
						6)	_

0

9)

true

	<b>o</b>	false	
Difficul Topic: Bloom' Subtopi Subtopi Chapter	s: 4. Ana ic: Prope ic: Classi r: 01 Che	Chemistry	
<b>7</b> )	Boilin	g point and melting point are extensive properties.	
			7)
	<ul><li></li><li></li><li></li><li></li><!--</td--><td>true false</td><td></td></ul>	true false	
Difficul Topic : Bloom's Subtopi Chapter	s: 4. Ana ic: Prope r: 01 Che	Chemistry	
8)	The ru	usting of a piece of iron under environmental conditions is a physical cha	inge.
			8)
	<ul><li></li><li></li><li></li></ul>	true false	
Difficul Topic : Bloom's Subtopi Chapter	s : 4. Ana ic : Prope r : 01 Che	Chemistry	

Version 1 3

The number 6.0448, rounded to 3 decimal places, becomes 6.045.

			9)
	<b>o</b>	true	
	<ul><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li></li><li><!--</td--><td>false</td><td></td></li></ul>	false	
Questi	on Detai	ls	
Difficu	lty: Easy	y	
_	-	f Chemistry	
	s: 3. App	· ·	
		ntific Notation and Significant Figures	
_		emistry: The Science of Change	
Access	ibility : K	Keyboard Navigation	
10)	A sco	op of vanilla ice cream is a pure substance.	
			10)
	$\circ$	A-m	
	<u></u>	true	
	0	false	
Questi	on Detai	ls	
	lty: Easy		
_	-	f Chemistry	
	s : 4. Ana	·	
		erties of Matter	
_		sification and States of Matter emistry: The Science of Change	
_		Keyboard Navigation	
7100033	ionity . I	Coyboard Navigation	
11)	A par	ticular temperature in degrees Celsius is larger than the temperature in	n kelvins.
			11)
	<b>o</b>	true	
	0	false	
Ouesti	on Detai	ls	
_	lty : Easy		
	-	f Chemistry	
	s: 4. Ana		
_		surement (SI Units)	
_		ensional Analysis	
Chapte	r : 01 Ch	emistry: The Science of Change	

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Accessibility: Keyboard Navigation

<b>12</b> )	Zero kelvin $0 \text{ K} < 0^{\circ}\text{F} < 0^{\circ}\text{C}$				
			12)		
	<b>o</b>	true			
	0	false			
	ion Deta				
_	-	of Chemistry			
	's : 4. A				
	มะ : Mea alty : Me	asurement (SI Units)			
	-	hemistry: The Science of Change			
_		Keyboard Navigation			
	·	,			
<b>13</b> )	77 K	is colder than 4 K.			
			12)		
			13)		
	0	true			
	0	false			
	O				
	ion Deta				
	ılty : Ea				
		of Chemistry			
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		asurement (SI Units) hemistry: The Science of Change			
		Keyboard Navigation			
7100051	onity.	Ney bound 1 vavigation			
4.4\	(TD)				
14)	The	juice from an orange is a mixture.			
			14)		
	<b>o</b>	true			
	0	false			
	$\sim$				

Question	<b>Details</b>
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Difficulty: Easy

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Properties of Matter

Subtopic : Classification and States of Matter Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

# MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.

15) What is a unifying principle that explains a body of experimental observations?

15)		
ורו		

- A) law
- B) hypothesis
- C) theory
- D) phenomena
- E) prediction

#### **Question Details**

Bloom's : 2. Understand

Difficulty: Easy

Subtopic : Scientific Method Topic : Study of Chemistry

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**16**) Which of the following is a tentative explanation for a set of observations?

16		
16	١	
10	,	

A) law

	B) hypothesis	
	C) theory	
	D) phenomena	
	E) prediction	
Ouest	ion Details	
	n's : 2. Understand	
	ulty: Easy	
_	pic : Scientific Method	
_	: Study of Chemistry	
_	er: 01 Chemistry: The Science of Change sibility: Keyboard Navigation	
<b>17</b> )	What is the term used for findings that are summarized based on a pattern or	trend?
		17)
	A) law	
	B) hypothesis	
	C) theory	
	D) phenomena	
	E) prediction	
Quest	ion Details	
	n's : 2. Understand	
	ulty: Easy	
_	pic : Scientific Method : Study of Chemistry	
-	er: 01 Chemistry: The Science of Change	
_	sibility: Keyboard Navigation	
18)	Which of the following activities is not a part of good science?	
		18)

A) proposing a the	orv	
B) developing a hy	•	
C) making quantita		
D) designing exper		
E) indulging in spe		
<b>Question Details</b>		
Bloom's : 2. Understand		
Difficulty : Easy Subtopic : Scientific Method		
Topic : Study of Chemistry		
Chapter: 01 Chemistry: The Sc	ience of Change	
Accessibility : Keyboard Navig		
<b>19</b> ) Which of the followtextbook?	wing is a 'substance' according to the definition given in your	
	19)	
A) air		
B) tap water		
C) sea water		
D) water		
E) toothpaste		
L) toompaste		
Question Details		
Topic : Study of Chemistry Subtopic : Properties of Matter		
Bloom's: 3. Apply		
Difficulty : Medium		
Subtopic : Classification and St		
Chapter: 01 Chemistry: The Sc		
Accessibility : Keyboard Navig	ation	
<b>20</b> ) Which of the follow	wing cannot be separated into simpler substances by chemical means	s?
	20)	

- A) element
- B) emulsion
- C) compound
- D) homogeneous mixture
- E) heterogeneous mixture

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Properties of Matter

Difficulty: Medium

Subtopic : Classification and States of Matter Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**21**) If a liquid contains 60% sugar and 40% water throughout its composition, then what is it called?

21	

- A) solute
- B) compound
- C) homogeneous mixture
- D) heterogeneous mixture
- E) solvent

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Properties of Matter

Difficulty: Medium

Subtopic : Classification and States of Matter Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

22) Which of the following does not have a uniform composition throughout?

	mistry fitting i fist it Lateron by Dai age Citor	
		22)
	A) element B) compound C) homogeneous mixture D) heterogeneous mixture E) solvent	
Difficul Topic : Subtopic Bloom's Subtopic Chapter	ty: Easy Study of Chemistry c: Properties of Matter s: 3. Apply c: Classification and States of Matter s: 01 Chemistry: The Science of Change bility: Keyboard Navigation	
23)	Which of the following is not an SI base unit?	
		23)
	A) meter B) ampere C) second D) gram E) kelvin	
Bloom's Topic: Subtopic Difficul Chapter	on Details s: 2. Understand Study of Chemistry c: Measurement (SI Units) ty: Medium s: 01 Chemistry: The Science of Change bility: Keyboard Navigation	
24)	The SI base unit of mass is	

Version 1 10

24) \_\_\_\_\_

	A) mg	
	B) g	
	C) kg	
	D) metric ton	
	E) lb	
Quest	tion Details	
	: Study of Chemistry	
_	ppic : Measurement (SI Units)	
	culty : Medium	
	n's: 1. Remember	
	ter: 01 Chemistry: The Science of Change ssibility: Keyboard Navigation	
Acces	ssibility. Reyboard Navigation	
25)	The SI prefix <i>mega</i> - (M) means	
,		
		25)
	A) 10 <sup>-6</sup>	
	B) 10 <sup>-3</sup>	
	C) $10^3$	
	D) $10^6$	
	E) 10 <sup>9</sup>	
	tion Details	
	culty: Easy	
	:: Study of Chemistry	
	ppic : Measurement (SI Units) n's : 1. Remember	
	ter: 01 Chemistry: The Science of Change	
	ssibility: Keyboard Navigation	
20		
<b>26</b> )	The SI prefixes <i>milli</i> - and <i>mega</i> - represent, respectively:	

Version 1 11

26) \_\_\_\_\_

- A)  $10^6$  and  $10^{-6}$
- B)  $10^{-3}$  and  $10^{6}$
- C)  $10^3$  and  $10^{-6}$
- D)  $10^{-3}$  and  $10^{9}$
- E)  $10^{-6}$  and  $10^{-3}$

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Difficulty : Medium Bloom's : 1. Remember

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

27) How many micrograms are in 65.3 kg?

27) \_\_\_\_\_

- A) 0.653 μg
- B)  $6.53 \times 10^7 \, \mu g$
- C)  $6.53 \times 10^4 \,\mu g$
- D)  $6.53 \times 10^{-8} \, \mu g$
- E)  $6.53 \times 10^{10} \, \mu g$

#### **Question Details**

Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's: 3. Apply

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**28)** A dose of medication was prescribed to be 35 microliters. Which of the following expresses that volume in centiliters?

28) \_\_\_\_\_

- A)  $3.5 \times 10^5 \text{ cL}$
- B)  $3.5 \times 10^4 \text{ cL}$
- C) 3.5 cL
- D)  $3.5 \times 10^{-4}$  cL
- E)  $3.5 \times 10^{-3}$  cL

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's: 3. Apply

Subtopic: Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**29**) How many milliliters is 0.0055 L?

29) \_\_\_\_\_

- A) 0.55 mL
- B) 5.5 mL
- C) 0.5 mL
- D) 0.0000055 mL
- E) 182 mL

#### **Question Details**

Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**30**) How many hertz is 600.11 MHz?

30) \_\_\_\_\_

- A)  $6.0011 \times 10^{-4}$  Hz
- B) 60.011 Hz
- C)  $6.0011 \times 10^6 \text{ Hz}$
- D)  $6.0011 \times 10^{-2}$  Hz
- E)  $6.0011 \times 10^8 \text{ Hz}$

#### **Question Details**

Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**31)** The distance between carbon atoms in ethylene is 134 picometers. Which of the following expresses that distance in meters?

31) \_\_\_\_\_

- A)  $1.34 \times 10^{-13}$  m
- B)  $1.34 \times 10^{-12}$  m
- C)  $1.34 \times 10^{-10}$  m
- D)  $1.34 \times 10^{-7}$  m
- E)  $1.34 \times 10^{-6}$  m

Oue	stion	Deta	ails

Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**32)** Which of these quantities represents the largest mass?

32) \_\_\_\_\_

- A)  $2.0 \times 10^2$  mg
- B) 0.0010 kg
- C)  $1.0 \times 10^5 \text{ mg}$
- D)  $2.0 \times 10^2 \text{ cg}$
- E) 10.0 dg

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic : Measurement (SI Units) Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**33**) The mass of a sample is 550 milligrams. Which of the following expresses that mass in kilograms?

33) \_\_\_\_\_

- A)  $5.5 \times 10^8 \text{ kg}$
- B)  $5.5 \times 10^5 \text{ kg}$
- C)  $5.5 \times 10^{-4} \text{ kg}$
- D)  $5.5 \times 10^{-6} \text{ kg}$
- E)  $5.5 \times 10^{-1}$  kg

#### **Question Details**

Topic : Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's: 3. Apply

Subtopic: Scientific Notation and Significant Figures

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

34) The average distance between the Earth and the Moon is 240,000 miles. Express this distance in kilometers. (1 mi = 1609 m)

34)

- A)  $6.1 \times 10^5 \text{ km}$
- B)  $5.3 \times 10^5 \text{ km}$
- C)  $3.9 \times 10^5 \text{ km}$
- D)  $1.5 \times 10^5 \text{ km}$
- E)  $9.4 \times 10^4 \text{ km}$

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

35) How many inches are in 382.5 cm? (1 in = 2.54 cm)

35)	
$\sim$ $\sim$ $\sim$	

- A) 150.6 in
- B)  $6.641 \times 10^{-3}$  in
- C) 151 in
- D) 971.6 in
- E) 972 in

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

36) How many cubic inches are in 1.00 liter? (1 in = 2.54 cm)

36) \_\_\_\_\_

- A)  $61.0 \text{ in}^3$
- B)  $155 \text{ in}^3$
- C) 394 in<sup>3</sup>
- D)  $1.64 \times 10^4 \text{ in}^3$
- E) None of these choices is correct.

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's: 3. Apply

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

37) \_\_\_\_\_

- A) 1.88 qt
- B) 0.472 qt
- C) 0.528 qt
- D)  $4.72 \times 10^5$  qt
- E)  $5.28 \times 10^5$  qt

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**38)** Given that 1 inch = 2.54 cm,  $1.00 \text{ cm}^3$  is equal to

38) \_\_\_\_\_

- A) 16.4 in<sup>3</sup>
- B) 6.45 in<sup>3</sup>
- C)  $0.394 \text{ in}^3$
- D)  $0.155 \text{ in}^3$
- E)  $0.0610 \text{ in}^3$

Question	Details
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Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's: 3. Apply

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

39) A large pizza has a diameter of 15 inches. Express this diameter in centimeters. (1 in = 2.54 cm)

39) \_\_\_\_\_

- A) 38 cm
- B) 24 cm
- C) 18 cm
- D) 9.3 cm
- E) 5.9 cm

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**40**) The average distance between the Earth and the Moon is 240,000 miles. Express this distance in meters. (1 mi = 1609 m)

40) \_\_\_\_\_

- A)  $6.1 \times 10^5$  m
- B)  $5.3 \times 10^5$  m
- C)  $3.9 \times 10^8$  m
- D)  $1.5 \times 10^5$  m
- E)  $9.4 \times 10^4$  m

#### **Question Details**

Topic : Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

41) What is the volume in milliliters of a 32.0 fl oz can of juice? (1 fl oz = 29.6 mL)

41) \_\_\_\_\_

- A) 1.08 mL
- B) 947 mL
- C) 0.925 mL
- D) 0.95 mL
- E) 1.1 mL

#### **Question Details**

Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

42) How many  $mm^3$  are in 16.7 cm<sup>3</sup>?

42) \_\_\_\_\_

- A)  $1.67 \times 10^{-5} \text{ mm}^3$
- B)  $1.67 \times 10^{-8} \text{ mm}^3$
- C)  $1.67 \times 10^7 \text{ mm}^3$
- D)  $1.67 \times 10^4 \text{ mm}^3$
- E)  $1.67 \times 10^{-4} \text{ mm}^3$

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's: 3. Apply

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**43**) If a patient in the hospital is running a temperature of 39.5°C, what is this in degrees Fahrenheit?

43) \_\_\_\_\_

- A) 99°F
- B) 101.3°F
- C) 102.4°F
- D) 103.1°F
- E) 104°F

#### **Question Details**

Topic : Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

<b>44</b> )	) If normal body	temperature is 9	98.6°F then w	vhat is this in d	egrees Celsius?
-------------	------------------	------------------	---------------	-------------------	-----------------

44) \_\_\_\_\_

- A) 34°C
- B) 35.5°C
- C) 36.4°C
- D) 37.0°C
- E) 38.7°C

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**45**) Express 122.0°F in °C.

45) \_\_\_\_\_

- A) 50.0°C
- B) 64.4°C
- C) 67.8°C
- D) 162.0°C
- E) 219.6°C

Question	<b>Details</b>
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Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**46**) The boiling point for liquid helium is 4.0 K. What is the temperature in degrees Fahrenheit?

46) \_\_\_\_\_

- A) -452.5°F
- B) -498.9°F
- C) -237.2°F
- D) 131.8°F
- E) 530.9°F

#### **Question Details**

Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's: 3. Apply

Subtopic: Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

47) If the temperature is 38.0°F then what is the temperature in kelvins?

47) \_\_\_\_\_

- A) 3.33 K
- B) 100.4 K
- C) 276.5 K
- D) 311.15 K
- E) 235.15 K

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's: 3. Apply

Subtopic: Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**48)** Dry ice (carbon dioxide) changes from a solid to a gas at –78.5°C. What is this temperature in °F?

48) \_\_\_\_\_

- A) -173°F
- B) -12.6°F
- C) -109°F
- D) -75.6°F
- E) None of them is within 2°F of the right answer.

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's: 3. Apply

Subtopic: Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

<b>49</b> )	The boiling point for	liquid nitrogen	is 77 K.	What is the	temperature i	n degrees
Fahren	heit?					

49) \_\_\_\_\_

- A) -127°F
- B) -289°F
- C) -321°F
- D) 177°F
- E) 662°F

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Bloom's: 3. Apply

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**50)** Acetone, which is used as a solvent and as a reactant in the manufacture of Plexiglas®, boils at 56.1°C. What is the boiling point in degrees Fahrenheit?

50) \_\_\_\_\_

- A) 159°F
- B) 133°F
- C) 101°F
- D) 69.0°F
- E) 43.4°F

Question	Details
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Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

51) Isopropyl alcohol, commonly known as rubbing alcohol, boils at 82.4°C. What is the boiling point in kelvins?

51) \_\_\_\_\_

- A) 387.6 K
- B) 355.6 K
- C) 323.6 K
- D) 190.8 K
- E) -190.8 K

#### **Question Details**

Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

52) Acetic acid boils at 244.2°F. What is its boiling point in degrees Celsius?

52) \_\_\_\_\_

- A) 382.0°C
- B) 167.7°C
- C) 153.4°C
- D) 117.9°C
- E) 103.7°C

#### **Question Details**

Topic: Study of Chemistry

Subtopic : Measurement (SI Units)

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

53) What is the volume of a container that contains 14.3 g of a substance having a density of  $0.988 \text{ g/cm}^3$ ?

53) \_\_\_\_\_

- A) 14.1 cm<sup>3</sup>
- B)  $0.0691 \text{ cm}^3$
- C) 14.5 cm<sup>3</sup>
- D)  $141 \text{ cm}^3$
- E)  $691 \text{ cm}^3$

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Difficulty: Medium

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

<b>54</b> )	If you have a graduated cylinder containing 15.5 mL and this volume changes to 95.2 mL
after a	metal with a mass of 7.95 g is dropped into the graduated cylinder, then what is the
density	y of this metal?

54) \_\_\_\_\_

- A) 0.0835 g/mL
- B) 0.513 g/mL
- C) 0.0718 g/mL
- D) 10.0 g/mL
- E)  $9.97 \times 10^{-2} \text{ g/mL}$

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

55) The density of mercury, the only metal to exist as a liquid at room temperature, is 13.6 g/cm<sup>3</sup>. What is that density in pounds per cubic inch? (1 in = 2.54 cm; 1 lb = 454 g)

55) \_\_\_\_\_

- A) 849 lb/in<sup>3</sup>
- B) 491 lb/in<sup>3</sup>
- C) 376 lb/in<sup>3</sup>
- D) 0.491 lb/in<sup>3</sup>
- E)  $1.83 \times 10^{-3} \text{ lb/in}^3$

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic : Measurement (SI Units)

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

Radio waves travel at the speed of light, which is  $3.00 \times 10^8$  m/s. How many minutes does it take for a radio message to reach Earth from Saturn if Saturn is  $7.9 \times 10^8$  km from Earth?

56) \_\_\_\_\_

- A)  $4.4 \times 10^{-2}$  min
- B)  $1.6 \times 10^5 \text{ min}$
- C)  $4.0 \times 10^{15}$  min
- D) 44 min
- E) 2.6 min

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

57) The speed needed to escape the pull of Earth's gravity is 11.3 km/s. What is this speed in mi/h? (1 mile = 1609 m)

57) \_\_\_\_\_

- A) 65,500 mi/h
- B) 25,300 mi/h
- C) 18,200 mi/h
- D) 1,090 mi/h
- E)  $5.02 \times 10^{-3}$  mi/h

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**58)** Radio waves travel at the speed of light, which is  $3.00 \times 10^8$  m/s. How many kilometers will radio messages to outer space travel in exactly one year? (365.24 days = 1 y)

58) \_\_\_\_\_

- A)  $9.46 \times 10^{15}$  km
- B)  $7.30 \times 10^8 \text{ km}$
- C)  $7.10 \times 10^{10}$  km
- D)  $9.47 \times 10^{12}$  km
- E)  $3.33 \times 10^{-3}$  km

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic : Measurement (SI Units)

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**59**) The diameter of Earth is 12.7 Mm. Express this diameter in centimeters.

59) \_\_\_\_\_

- A)  $1.27 \times 10^5$  cm
- B)  $1.27 \times 10^6$  cm
- C)  $1.27 \times 10^7$  cm
- D)  $1.27 \times 10^8$  cm
- E)  $1.27 \times 10^9$  cm

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic : Measurement (SI Units)

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

60) Some molecules move with speeds approaching the "escape velocity" from Earth, which is 7.0 miles per second. What is this speed in cm/h? (1 mi = 1609 m)

60) \_\_\_\_\_

- A) 313 cm/h
- B)  $4.1 \times 10^5$  cm/h
- C)  $4.1 \times 10^9$  cm/h
- D)  $1.1 \times 10^6 \text{ cm/h}$
- E)  $1.6 \times 10^5 \text{ cm/h}$

Ones	tion	<b>Details</b>

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic : Measurement (SI Units)

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

61) The city of Los Angeles is now approximately 2400 miles south of Anchorage, Alaska. It is moving slowly northward as the San Andreas fault slides along. If Los Angeles is to arrive near Anchorage in 76 million years, at what average rate will it have to move in mm per month? (1 mi = 1609 m)

61) \_\_\_\_\_

- A)  $2.0 \times 10^{-10}$  mm/mo.
- B)  $6.6 \times 10^{-6}$  mm/mo.
- C) 4.2 mm/mo.
- D) 9.5 mm/mo.
- E) 51 mm/mo.

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Subtopic: Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

Which of the following speeds is the greatest? (1 mi = 1609 m)

62) \_\_\_\_\_

- A) 40 mi/h
- B)  $2.0 \times 10^5$  mm/min
- C) 40 km/h
- D) 0.74 km/min
- E) 400 m/min

#### **Question Details**

Topic: Study of Chemistry

Subtopic: Measurement (SI Units)

Subtopic: Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard Bloom's: 5. Evaluate

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

63) Iron has a density of  $7.87 \text{ g/cm}^3$ . What mass of iron would be required to cover a football playing surface of  $120 \text{ yds} \times 60$ . yds to a depth of 1.0 mm? (1 inch = 2.54 cm)

63) \_\_\_\_\_

- A) 76 kg
- B) 47 Mg
- C)  $7.6 \times 10^5$  g
- D)  $4.7 \times 10^8$  g
- E)  $1.9 \times 10^7$  g

#### **Question Details**

Topic: Study of Chemistry Bloom's: 4. Analyze

Subtopic: Measurement (SI Units)

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

<b>64</b> )	The recommended daily allowance (RDA) of calcium is 1.2 g. Calcium carbonate
contaii	ns 12.0% calcium by mass. How many grams of calcium carbonate are needed to provide
the RD	OA of calcium?

64) \_\_\_\_\_

- A) 0.10 g
- B) 0.14 g
- C) 1.2 g
- D) 10. g
- E) 14. g

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic : Measurement (SI Units)

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

65) One of the common intravenous fluids, called physiological saline, is a homogeneous mixture of NaCl in water. In this mixture, 0.89% of the mass is contributed by the NaCl. What mass of NaCl is found in 450. mL of physiological saline? ((Density of physiological saline =  $1.005 \text{ g/cm}^3$ )

65) \_\_\_\_\_

- A) 2.0 g
- B) 4.0 g
- C) 5.1 g
- D) 508 g
- E) 400 g

Ones	tion	<b>Details</b>

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic : Measurement (SI Units)

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

66) An empty flask's mass is 17.4916 g, and its mass is 43.9616 g when filled with water at  $20.0^{\circ}$ C (density = 0.9982 g/mL). The density of "heavy water" at  $20.0^{\circ}$ C is 1.1053 g/mL. What is the mass of the flask when filled with heavy water at  $20.0^{\circ}$ C?

66) \_\_\_\_\_

- A) 29.2573 g
- B) 46.8016 g
- C) 46.7489 g
- D) 29.3100 g
- E) 43.9140 g

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

67) A flask has a mass of 78.23 g when empty and 593.63 g when filled with water. When the same flask is filled with concentrated sulfuric acid, H<sub>2</sub>SO<sub>4</sub>, its mass is 1026.57 g. What is the density of concentrated sulfuric acid? (Assume water has a density of 1.00 g/cm<sup>3</sup> at the temperature of the measurement.)

67) \_\_\_\_\_

- A) 1.992 g/cm<sup>3</sup>
- B)  $1.840 \text{ g/cm}^3$
- C) 1.729 g/cm<sup>3</sup>
- D)  $1.598 \text{ g/cm}^3$
- E)  $0.543 \text{ g/cm}^3$

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Subtopic: Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

68) Talc is a mineral with low conductivity for heat and electricity which is not attacked by acid. It is used in talcum powder and face powder. Suppose a sample of talc weighs 13.65 g with a density of 1.75 g/cm<sup>3</sup> in mineral oil. If this same sample of talc in air weighs 35.97 g, assuming no volume change, what is the density of the talc sample in air?

68) \_\_\_\_\_

- A) 4.61 g/cm<sup>3</sup>
- B)  $2.82 \text{ g/cm}^3$
- C) 2.63 g/cm<sup>3</sup>
- D) 2.44 g/cm<sup>3</sup>
- E) 1.61 g/cm<sup>3</sup>

#### **Question Details**

Topic: Study of Chemistry Bloom's: 4. Analyze

Subtopic : Measurement (SI Units)

Subtopic: Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Difficulty: Hard

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

<b>69</b> )	Which of the following is an example of an observation?	
		69)
	A) Gases expand as their temperature increases because the gas molecules a	re moving
more	rapidly.	
	B) Paraffin wax begins to melt at 57°C.	
	C) Three samples of wax are heated to 75°C.	
	D) The force acting on an object is equal to its mass times its acceleration.	
	E) Will all waxes melt at the same temperature?	
Ouget	ion Details	
-	's : 2. Understand	
	ulty : Easy	
	pic : Scientific Method	
_	: Study of Chemistry	
	pic : Properties of Matter	
•	er : 01 Chemistry: The Science of Change sibility : Keyboard Navigation	
Acces	Sibility . Reyboard Navigation	
<b>70</b> )	Which of the following is a <i>chemical</i> change?	
		70)
	A) boiling water	
	B) melting wax	
	C) broiling a steak on a grill	
	D) condensing water vapor into rainfall	

Version 1 37

E) carving a piece of wood

<b>Question Do</b>	etails
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Difficulty: Easy

Topic : Study of Chemistry Subtopic : Properties of Matter

Bloom's: 3. Apply

Subtopic : Classification and States of Matter Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**71)** Which of these is an example of aphysical property?

71) \_\_\_\_\_

- A) corrosiveness of sulfuric acid
- B) toxicity of cyanide
- C) flammability of gasoline
- D) neutralization of stomach acid with an antacid
- E) lead becomes a liquid when heated to 601°C.

#### **Question Details**

Difficulty: Easy

Topic : Study of Chemistry Subtopic : Properties of Matter

Bloom's: 3. Apply

Subtopic : Classification and States of Matter Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**72)** Which one of these represents aphysical change?

72) \_\_\_\_\_

- A) Water, when heated, forms steam.
- B) Bleach turns hair yellow.
- C) Sugar, when heated, becomes brown.
- D) Milk turns sour.
- E) Apples, when exposed to air, turn brown.

Difficult Topic: S Subtopic Bloom's Subtopic Chapter	ty: Easy Study of Chemistry c: Properties of Matter : 3. Apply c: Classification and States of Matter : 01 Chemistry: The Science of Change bility: Keyboard Navigation	
73)	Which one of these represents a <i>chemical</i> change?	
		73)
	A) boiling water to form steam B) turning hair yellow with bleach C) melting butter D) mixing powdered charcoal and oxygen at room temperature E) cutting a bar of sodium metal into pieces with a knife	
Difficult Topic: S Subtopic Bloom's Subtopic Chapter	n Details ty: Easy Study of Chemistry c: Properties of Matter : 3. Apply c: Classification and States of Matter : 01 Chemistry: The Science of Change bility: Keyboard Navigation	
74)	Which of the following is an extensive property of oxygen?	74)
	<ul><li>A) boiling point</li><li>B) temperature</li><li>C) average kinetic energy of molecules</li></ul>	

Version 1 39

D) densityE) mass

Questi	on Details
Difficu	lty : Easy
Topic : Study of Chemistry Subtopic : Properties of Matter	
-	ic : Classification and States of Matter
_	r: 01 Chemistry: The Science of Change ibility: Keyboard Navigation
Access	ionity . Reyboard Navigation
<b>75</b> ) this ca	When the value of something does not depend on the amount of the matter then what is alled?
	75)
	A) empirical property
	B) intensive property
	C) inclusive property
	D) extensive property
	E) exclusive property
_	on Details
	lty: Easy
-	Study of Chemistry ic: Properties of Matter
-	's: 3. Apply
	ic : Classification and States of Matter
_	r: 01 Chemistry: The Science of Change
-	ibility : Keyboard Navigation
<b>76</b> )	Which of the following is an extensive property?

Version 1 40

76) \_\_\_\_\_

	A) density B) temperature C) mass D) specific Heat E) pressure	
Difficu Topic: Bloom Subtop Chapte	on Details  alty: Easy  Study of Chemistry  s: 3. Apply  sic: Scientific Notation and Significant Figures  ser: 01 Chemistry: The Science of Change  sibility: Keyboard Navigation	
77)	The number $1.050 \times 10^9$ has how many significant figures?	77)
	A) 2 B) 3 C) 4 D) 9 E) 13	
Topic: Bloom' Difficu Subtop Chapte	on Details Study of Chemistry S: 3. Apply Ity: Medium Sic: Scientific Notation and Significant Figures Ser: 01 Chemistry: The Science of Change Sibility: Keyboard Navigation	
<b>78</b> ) appro	After carrying out the operation $(13.7 + 0.027) \div 8.221$ , how many significant priate to show in the result?	figures are
		78)

Version 1 41

A) 1	
B) 2	
C) 3	
D) 4	
E) 5	
Question Details	
Topic: Study of Chemistry	
Bloom's: 3. Apply	
Difficulty : Medium	
Subtopic : Scientific Notation and Significant Figures	
Chapter: 01 Chemistry: The Science of Change	
Accessibility: Keyboard Navigation	
<b>79</b> ) How many significant figures are in 0.006570?	
17) How many significant figures are in 0.000370.	
	79)
A) 3	
B) 4	
C) 5	
·	
D) 6	
E) 7	
Question Details	
Topic: Study of Chemistry	
Bloom's : 3. Apply	
Difficulty: Medium	
Subtopic : Scientific Notation and Significant Figures	
Chapter: 01 Chemistry: The Science of Change	
Accessibility : Keyboard Navigation	
<b>90)</b> The result of (2.9621 v.1.5620) 5.00 is measured we witten as	
80) The result of $(3.8621 \times 1.5630) - 5.98$ is properly written as	
	80)

A \	$\sim$	$\sim$
A)	( )	I In
/ <b>1</b> /	v.	$\mathbf{v}$

B) 0.056

C) 0.0565

D) 0.05646

E) 0.056462

#### **Question Details**

Topic: Study of Chemistry

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

81) Select the answer with the correct number of decimal places for the following sum:

13.914 cm + 243.1 cm + 12.00460 cm =

81) \_\_\_\_\_

- A) 269.01860 cm
- B) 269.0186 cm
- C) 269.019 cm
- D) 269.02 cm
- E) 269.0 cm

#### **Question Details**

Topic : Study of Chemistry

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

82) How many significant figures does the sum 8.5201 + 1.93 contain?

82) \_\_\_\_\_

A)	1
1 <b>1</b> /	1

B) 2

C) 3

D) 4

E) 5

#### **Question Details**

Topic: Study of Chemistry

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**83)** Select the answer that expresses the result of this calculation with the correct number of significant figures.

13.602 × 190 × 306 42 × 14097

83) \_\_\_\_\_

- A) 13.3568
- B) 13.357
- C) 13.36
- D) 13.4
- E) 13

#### **Question Details**

Topic: Study of Chemistry

Bloom's : 3. Apply
Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**84)** Which is correct if 0.01234 is rewritten in scientific notation?

- A)  $1.234 \times 10^{-3}$
- B)  $12.3 \times 10^4$
- C)  $1 \times 10^{-1}$
- D)  $1.234 \times 10^2$
- E)  $1.234 \times 10^{-2}$

#### **Question Details**

Difficulty: Easy

Topic: Study of Chemistry

Bloom's: 3. Apply

Subtopic : Scientific Notation and Significant Figures Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**85**) You prepare 1000. mL of tea and transfer it to a 1.00-quart pitcher for storage. Which of the following statements is true? (1 L = 1.0567 qt)

85) \_\_\_\_\_

- A) The pitcher will be filled to 100% of its capacity with no tea spilled.
- B) The pitcher will be filled to about 95% of its capacity.
- C) The pitcher will be filled to about 50% of its capacity.
- D) The pitcher will be completely filled and a small amount of tea will overflow.
- E) The pitcher will be completely filled and most of the tea will overflow.

#### **Question Details**

Topic : Study of Chemistry Difficulty : Medium

Subtopic : Dimensional Analysis

Bloom's: 5. Evaluate

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**86)** Which is correct if 52.068881 is rewritten in scientific notation and rounded to three significant figures?

86) \_\_\_\_\_

- A)  $5.21 \times 10^{-1}$
- B)  $5.20 \times 10^{-1}$
- C)  $5.21 \times 10^{1}$
- D)  $5.20 \times 10^{1}$
- E)  $5.21 \times 10^2$

#### **Question Details**

Topic : Study of Chemistry Bloom's : 3. Apply

Difficulty: Medium

Subtopic : Scientific Notation and Significant Figures Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**87**) Which is correct if 15,390,000 is rounded to two significant figures?

87) \_\_\_\_\_

- A) 15
- B)  $1.5 \times 10^{-7}$
- C)  $1.5 \times 10^8$
- D) 15,400,000
- E) 15,000,000

#### **Question Details**

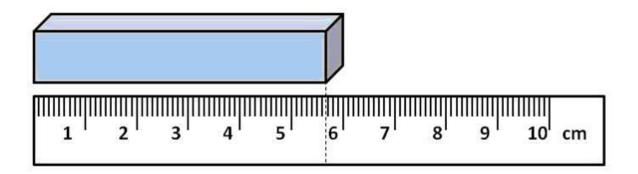
Topic: Study of Chemistry

Bloom's : 3. Apply Difficulty : Medium

Subtopic : Scientific Notation and Significant Figures Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

88) What is the length of the box, using the proper number of significant figures and units?



88) \_\_\_\_\_

- A) 5.5 cm
- B) 5 cm
- C) 6 cm
- D) 5.67 cm
- E) 5.6 cm

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Difficulty: Medium

Subtopic : Scientific Notation and Significant Figures Chapter : 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**89**) The dark meat of a 20-pound turkey requires an internal temperature of 180°F to be fully cooked. What minimum temperature reading should be displayed on a food thermometer that only measures in degrees Celsius?

89) \_\_\_\_\_

- A) 82°C
- B) 354°C
- C) 261°C
- D) -192°C
- E)  $-310^{\circ}$ C

#### **Question Details**

Difficulty: Easy

Topic: Study of Chemistry

Bloom's: 3. Apply

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**90**) 50.0 grams of acetic acid are required for an experiment. What volume, in milliliters, of a 1.105 g/cm<sup>3</sup> acetic acid solution must be measured for the experiment?

90)

- A) 0.0452 mL
- B) 45.2 mL
- C) 55.3 mL
- D) 0.452 mL
- E) 4.52 mL

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic : Measurement (SI Units)

Difficulty: Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

91)	A geology student found an irregularly shaped rock, with a mass of 28.63 grams, and
placed	it into a graduated cylinder containing 13.31 mL of water. If the water level increased to
19.73 ı	mL after the rock was placed in the cylinder, what is the density of the rock, in g/mL?

91)	
91)	

- A) 4.46 g/mL
- B) 4460 g/mL
- C) 2.20 g/mL
- D) 0.455 g/mL
- E) 44.6 g/mL

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic : Measurement (SI Units)

Difficulty: Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**92)** An average Mastiff puppy weighs 2.72 kilograms. How many pounds is an average Mastiff puppy? (11b = 453.6 g)

92) \_\_\_\_\_

- A) 1.24 lb
- B) 10.0 lb
- C) 59.8 lb
- D) 6.00 lb
- E) 72.0 lb

<b>Question Details</b>	3
Difficulty: Easy	

Topic: Study of Chemistry Bloom's: 4. Analyze

Subtopic : Measurement (SI Units)

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

93) If the density of corn syrup is 1.380 g/mL and a sample of corn syrup has a mass of 32 grams, what is the volume of corn syrup, in liters?

93) \_\_\_\_\_

- A) 43 L
- B) 23 L
- C) 0.043 L
- D) 0.023 L
- E) 2.3 L

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Difficulty: Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic: Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

94) A smart phone has dimensions of 4.9 inches (height), 2.3 inches (width) and 8.0 millimeters (depth). What is the volume of the smart phone in cubic centimeters? (1 in = 2.54 cm)

94) \_\_\_\_\_

- A)  $58 \text{ cm}^3$
- B)  $1.7 \times 105 \text{ cm}^3$
- C)  $90 \text{ cm}^3$
- D)  $3.4 \text{ cm}^3$
- E)  $34 \text{ cm}^3$

#### **Question Details**

Topic : Study of Chemistry Bloom's : 4. Analyze

Subtopic: Measurement (SI Units)

Difficulty: Medium

Subtopic : Scientific Notation and Significant Figures

Subtopic : Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

**95)** There are 58 counties in California and about 660,000 people in each county. How many million people live in California?

95) \_\_\_\_\_

- A) 383 million people
- B) 38 million people
- C) 40 million people
- D) 58 million people
- E) 11 million people

#### **Question Details**

Topic: Study of Chemistry

Bloom's : 3. Apply Difficulty : Medium

Subtopic: Dimensional Analysis

Chapter: 01 Chemistry: The Science of Change

Accessibility: Keyboard Navigation

## **Answer Key**

Test name: CH01

- 1) FALSE
- 2) FALSE
- 3) TRUE
- 4) TRUE
- 5) TRUE
- 6) FALSE
- 7) FALSE
- 8) FALSE
- 9) TRUE
- 10) FALSE
- 11) FALSE
- 12) TRUE
- 13) FALSE
- 14) TRUE
- 15) C
- 16) B
- 17) A
- 18) E
- 19) D
- 20) A
- 21) C
- 22) D
- 23) D
- 24) C
- 25) D
- 26) B

- 27) E
- 28) E
- 29) B
- 30) E
- 31) C
- 32) C
- 33) C
- 34) C
- 35) A
- 36) A
- 37) C
- 38) E
- 39) A
- 40) C
- 41) B
- 42) D
- 43) D
- 44) D
- 45) A
- 10) 1
- 46) A
- 47) C
- 48) C
- 49) C
- 50) B
- 51) B
- 52) D
- 53) C
- 54) E
- 55) D
- 56) D

Version 1

- 57) B
- 58) D
- 59) E
- 60) C
- 61) C
- 62) A
- 63) B
- 64) D
- 65) B
- 66) B
- 67) B
- 68) A
- 69) B
- **-**0> -
- 70) C
- 71) E
- 72) A
- 73) B
- 74) E
- 75) B
- 76) C
- 77) C
- 70) 0
- 78) C
- 79) B
- 80) A
- 81) E
- 82) D
- 83) E
- 84) E
- 85) D
- 86) C

Version 1

- 87) E
- 88) D
- 89) A
- 90) B
- 91) A
- 92) D
- 93) D
- 94) A
- 95) B