

Name /test-bank-principles-of-radiographic-imaging-an-art-and-a-science-6e-carlton : _____ : _____
Class _____ Date _____
e: _____

Chapter 01 - Basic Mathematics

Multiple Choice

1. $1/7 + 5/9 =$

- a. $6/16$
- b. $35/63$
- c. $44/63$
- d. $9/35$

ANSWER:

c

POINTS:

1

DIFFICULTY:

Easy

QUESTION TYPE:

Multiple Choice

HAS VARIABLES:

False

DATE CREATED:

2/4/2019 12:41 AM

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2/5/2019 2:30 AM

2. $5/8 \times 7/9 =$

- a. $12/17$
- b. $45/56$
- c. $12/72$
- d. $35/72$

ANSWER:

d

POINTS:

1

DIFFICULTY:

Easy

QUESTION TYPE:

Multiple Choice

HAS VARIABLES:

False

DATE CREATED:

2/4/2019 12:45 AM

DATE MODIFIED:

2/5/2019 2:31 AM

3. $1/6 \div 4/5 =$

- a. $1/5$
- b. $4/11$
- c. $5/24$
- d. $4/30$

ANSWER:

c

POINTS:

1

DIFFICULTY:

Easy

QUESTION TYPE:

Multiple Choice

HAS VARIABLES:

False

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4. $46.3 + 29.87 =$

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- a. 245
- b. 2,450
- c. 76.17
- d. 7.617

ANSWER: c
 POINTS: 1
 DIFFICULTY: Easy
 QUESTION TYPE: Multiple Choice
 HAS VARIABLES: False
 DATE CREATED: 2/4/2019 2:21 AM
 DATE MODIFIED: 2/5/2019 2:32 AM

5. $16.3 \times 1.2 =$

- a. 19.56
- b. 195.6
- c. 17.5
- d. 1.75

ANSWER: a
 POINTS: 1
 DIFFICULTY: Easy
 QUESTION TYPE: Multiple Choice
 HAS VARIABLES: False
 DATE CREATED: 2/4/2019 2:23 AM
 DATE MODIFIED: 2/5/2019 2:33 AM

6. $1,800 \div 0.30 =$

- a. 0.0001
- b. 540
- c. 6,000
- d. 60,000

ANSWER: c
 POINTS: 1
 DIFFICULTY: Easy
 QUESTION TYPE: Multiple Choice
 HAS VARIABLES: False
 DATE CREATED: 2/4/2019 9:48 PM
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7. Convert $7/12$ to a decimal.

- a. 0.583
- b. 1.714
- c. 19.83

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d. 84.00

ANSWER:

a

POINTS:

1

DIFFICULTY:

Medium

QUESTION TYPE:

Multiple Choice

HAS VARIABLES:

False

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DATE MODIFIED:

2/5/2019 1:16 AM

8. Convert 87.3% to a decimal.

- a. 0.0873
- b. 0.873
- c. 8.73
- d. 87.3

ANSWER:

b

POINTS:

1

DIFFICULTY:

Medium

QUESTION TYPE:

Multiple Choice

HAS VARIABLES:

False

DATE CREATED:

2/4/2019 10:00 PM

DATE MODIFIED:

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9. Change 23.46 to a percent.

- a. 0.2346%
- b. 23.46%
- c. 2.346%
- d. 2,346%

ANSWER:

d

POINTS:

1

DIFFICULTY:

Medium

QUESTION TYPE:

Multiple Choice

HAS VARIABLES:

False

DATE CREATED:

2/4/2019 10:12 PM

DATE MODIFIED:

2/28/2019 4:01 PM

10. The number of significant digits in 3.75×10^4 is

- a. two.
- b. three.
- c. four.
- d. five.

ANSWER:

b

POINTS:

1

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DIFFICULTY: Medium
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
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11. The inverse of 0.137 is approximately

- a. 1.37.
- b. 7.30.
- c. 73.
- d. 137.

ANSWER: b
POINTS: 1
DIFFICULTY: Medium
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 2/4/2019 10:17 PM
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12. Convert 540.7 to scientific notation.

- a. 5.407×10^2
- b. 5.407×10^{-2}
- c. 5.407×10^3
- d. 5.407×10^{-3}

ANSWER: b
POINTS: 1
DIFFICULTY: Medium
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 2/4/2019 10:24 PM
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13. $2.63 \times 10^{-2} =$

- a. 0.00263
- b. 0.0263
- c. 26.3
- d. 263

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

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HAS VARIABLES: False
DATE CREATED: 2/4/2019 10:27 PM
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14. If you purchase four (4) twelve-packs of soda as a fundraiser for \$10.00 and sell each can of soda for 50 cents, your profit is

- a. \$9.74.
- b. \$14.00.
- c. \$24.00.
- d. \$34.00.

ANSWER: b
POINTS: 1
DIFFICULTY: Medium
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 2/4/2019 10:29 PM
DATE MODIFIED: 2/5/2019 1:19 AM

15. Mercury (Hg), a metal, is liquid at room temperature. Its density is 13.6 g/cm^3 . If you have 100 mL of Hg, how many grams do you have?

- a. 0.136
- b. 1.36×10^{-3}
- c. 136
- d. 1.36×10^3

ANSWER: d
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 2/4/2019 10:31 PM
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16. Convert 113°F to $^\circ\text{C}$.

- a. 20.3°C
- b. 62.8°C
- c. 81°C
- d. 235°C

ANSWER: b
POINTS: 1
DIFFICULTY: Medium
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False

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17. The equation $x^2 + 2xy + y^2$ can be expressed as:

- a. $(x + y)^2$
- b. $2x + 2y$
- c. $x + 2xy + y^2$
- d. $x^2 + y^2 + xy$

ANSWER: a
POINTS: 1
DIFFICULTY: Medium
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 2/4/2019 10:35 PM
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18. Consider the following proportional relationship: $x = ay/bd$. Assuming all other quantities remain constant, what happens to the value of x when b increases?

- a. increases
- b. decreases
- c. remains the same
- d. cannot be determined

ANSWER: b
POINTS: 1
DIFFICULTY: Medium
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 2/4/2019 10:36 PM
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19. Consider the following proportional relationship: $x = ay/bd$. Assuming all other quantities remain constant, what happens to the value of x when d decreases?

- a. increases
- b. decreases
- c. remains the same
- d. cannot be determined

ANSWER: a
POINTS: 1
DIFFICULTY: Medium
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False

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20. Consider the following proportional relationship: $x = ay/bd$. Assuming all other quantities remain constant, what happens to the value of x when the product of bd increases?

- a. increases
- b. decreases
- c. remains the same
- d. cannot be determined

ANSWER: b
POINTS: 1
DIFFICULTY: Medium
QUESTION TYPE: Multiple Choice
HAS VARIABLES: False
DATE CREATED: 2/4/2019 10:40 PM
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Completion

21. 74 kV is equal to _____ volts.

ANSWER: 74,000
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Completion
HAS VARIABLES: False
STUDENT ENTRY MODE: Basic
DATE CREATED: 2/5/2019 9:11 PM
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22. 400 mA is equal to _____ amperes.

ANSWER: 0.40
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Completion
HAS VARIABLES: False
STUDENT ENTRY MODE: Basic
DATE CREATED: 2/5/2019 9:13 PM
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23. 120,000 V is equal to _____ kVp.

ANSWER: 120
POINTS: 1
DIFFICULTY: Easy

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QUESTION TYPE: Completion
HAS VARIABLES: False
STUDENT ENTRY MODE: Basic
DATE CREATED: 2/5/2019 9:14 PM
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24. 3.7 m are equal to _____ cm.

ANSWER: 370
POINTS: 1
DIFFICULTY: Easy
QUESTION TYPE: Completion
HAS VARIABLES: False
STUDENT ENTRY MODE: Basic
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Problem

25. $1/R = 1/R_1 + 1/R_2$; solve for R_2 .

ANSWER: $RR_1/R_1 - R$
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Numeric Response
HAS VARIABLES: False
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26. $F = Gm_1m_2/r^2$; solve for m_1 .

ANSWER: Fr^2/Gm_2
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Numeric Response
HAS VARIABLES: False
DATE CREATED: 2/5/2019 9:18 PM
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27. $PV = nRT$; solve for T .

ANSWER: PV/nR
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Numeric Response
HAS VARIABLES: False

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28. $I = E/R + r$; solve for r .

ANSWER: $E - IR/I$
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Numeric Response
HAS VARIABLES: False
DATE CREATED: 2/5/2019 9:20 PM
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29. $P = 2L + 2W$; solve for L .

ANSWER: $(P - 2W)/2$
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Numeric Response
HAS VARIABLES: False
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30. $V = 1/3 \pi r^2 h$; solve for π .

ANSWER: $3V/r^2 h$
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Numeric Response
HAS VARIABLES: False
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31. $P_1 V_1 / T_1 = P_2 V_2 / T_2$; solve for V_2 .

ANSWER: $P_2 V_2 T_1 / P_1 V_1$
POINTS: 1
DIFFICULTY: Difficult
QUESTION TYPE: Numeric Response
HAS VARIABLES: False
DATE CREATED: 2/5/2019 9:22 PM
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