Integers and Rational Numbers

Multiple Choice Test A

Choose the best answer.

1. Which replacement for *x* makes this a true statement?

5 < x

A -6

C 4

B 0

D 9

2. Order the integers from least to greatest: –3, 4, 1.

A -3, 1, 4

B 1, -3, 4

3. Find the absolute value |-3|.

A -3

B 3

4. At 6 A.M. the temperature was -8 °C. In the afternoon, the temperature was 3 °C. What was the change of temperature during the day?

A -11 °C

C 5°C

B −5 °C

D 11 °C

5. Evaluate a + b for a = 5 and b = -2.

A -5

C 2

B -3

D 3

6. Find the sum -9 + 5.

A -14

C 4

B -4

D 14

7. Evaluate a - b for a = -3 and b = -8.

A -11

B 5

8. Find the difference 6 - (-8).

A 14

B -2

9. Find the product 4 • (−3).

A -12

C 1

B -7

D 12

10. Find the quotient $-24 \div (-8)$.

A 3

C -16

B -3

D -32

11. Simplify (−5) • (−6).

A -30

B 30

12. Solve n - 4 = -2.

A *n*= 6

C n = -6

B n=2

D n = -14

13. Solve $\frac{g}{3} = -5$.

A g = 15

C g = -2

B $g = -\frac{3}{5}$

D g = -15

14. Terri withdrew \$17 from her savings account. The current balance is \$33. How much was the balance before her withdrawal?

A \$16

B \$50

Multiple Choice Test A, continued

- 15. Solve -9 + n = 15.
 - A -24
- C 6
- B 24
- D -6
- 16. Which decimal is equivalent to $\frac{3}{10}$?
 - A 3.333
- C 0.6
- B 0.7
- D 0.3
- 17. Beth bought 25 trading cards of which 19 were sports cards. Which decimal shows what portion of the cards were sports cards?
 - A 0.76
- B 1.316
- 18. Which decimal is equivalent to $\frac{1}{2}$
 - A 0.625
- C 0.87
- B 0.875
- D 0.78
- 19. Which group of decimals is in order from greatest to least?
 - A 0.37, 0.037, 0.073, 0.307
 - B 0.037, 0.073, 0.307, 0.37
 - C 0.073, 0.307, 0.37, 0.037
 - D 0.37, 0.307, 0.073, 0.037

- 20. Which number is the least?
 - A 0.4
- B 0.35
- 21. Which number is greatest?

C 0.26

- D 0.44
- 22. Which set of fractions is in order from least to greatest?

Multiple Choice Test B

Choose the best answer.

- 1. Which makes the statement, $-7 > \square$, true?
 - 8- A
- C 0
- B -2
- D 6
- 2. Order the integers from least to greatest: 4, -3, 0, 8, -5.
 - F 8, 4, 0, -3, -5
 - G = -3, -5, 0, 4, 8
 - H -5, -3, 0, 4, 8
 - J = 0, -3, 4, -5, 8
- 3. Find the absolute value |-8|.
 - 8- A
- C 0
- B -2
- D 8
- 4. At 6 A.M. the temperature was −5 °C. In the afternoon, the temperature was 10 °C. What was the change of temperature during the day?
 - F -15 °C
- H 10 °C
- G -5 °C
- J 15 °C
- 5. Evaluate a + b for a = -9 and b = 6.
 - A -15
- C 3
- B -3
- D 15
- 6. Add 24 + (-18).
 - F -42
- H 6
- G -6
- J 42
- 7. Find the difference -16 (-22).
 - A -38
- C 6
- B -6
- D 38

- 8. Find the difference 5 (-13).
 - F -18
- H 8
- G -8

- J 18
- 9. Find the product $5 \cdot (-10)$.
 - A -50
- C 2
- B -5
- D 50
- 10. Find the quotient $-200 \div (-40)$.
 - F -240
- H 5
- G -5

- J 8,000
- 11. Simplify -11(5).
 - A -55
- C -5
- B -25
- D 25
- 12. Solve n 9 = -5.
 - F n = -14
- H n = 4
- G n = -4
- J n = 14
- 13. Solve $\frac{g}{4} = -16$.
 - A g = -64
- C q=4
- B q = -4
- D q = 64
- 14. Marilyn withdrew \$43 from her savings account. The current balance is \$87. How much was the balance before her withdrawal?
 - F -\$44
- H \$87
- G \$44
- J \$130
- 15. Solve -8 + x = 12.
 - A 20
- C 20

B 4

D -4

Multiple Choice Test B, continued

- 16. Which decimal is equivalent to
 - F 0.625
- H 0.78
- G 0.7
- J 0.875
- 17. Richard bought 48 trading cards, of which 21 were sports cards. Which decimal shows what portion of the cards were sports cards?
 - A 0.21
- C 0.4375
- B 0.41
- D 2.29
- 18. Which decimal is equivalent to $\frac{3}{8}$?
 - F 0.83
- H 0.38
- G 0.375
- J 0.625
- 19. Which group of decimals is in order from greatest to least?
 - A 0.054, 0.405, 0.45, 0.504
 - B 0.504, 0.054, 0.45, 0.405
 - C 0.405, 0.045, 0.054, 0.504
 - D 0.504, 0.45, 0.405, 0.054

- 20. Which number is the least?
 - F 0.41
- G 0.124
- 21. Which number is greatest?

- C 0.68
- D 0.77
- 22. Which set of fractions is in order from least to greatest?

Multiple Choice Test C

Choose the best answer.

1. Which replacement for x makes this a true statement?

x < -31

A - 42

C 5

B -12

D 45

2. Order the integers from least to greatest: -84, 22, 0, -9, 5.

F 22, 5, 0, -9, -84

G 0, 5, -9, 22, -84

H -84, -9, 0, 5, 22

J -9, -84, 0, 5, 22

3. Find the absolute value |-47|.

A –47

C 1

B 0

D 47

4. At 6 A.M. the temperature was −17 °C. In the afternoon, the temperature was 13 °C. What was the change of temperature during the day?

F -30 °C

H 15 °C

G -4 °C

J 30 °C

5. Evaluate a + b for a = -62 and b = 33.

A -95

C -29

B -39

D 29

6. Add 23 + (-19).

F -4

H 14

G 4

J 42

7. Find the difference -55 - 67.

A -122

C -2

B -12

D 12

8. Find the difference 28 - (-37).

F -9

H 55

G 9

J 65

9. Find the product $13 \cdot (-9)$.

A 117

C - 1.444

B 4

D -117

10. Find the quotient $-168 \div (-14)$.

F 12

H -12

G 0.083

J -182

11. Find the product $(-16) \cdot (-25)$.

A -400

C 0.615

B -41

D 400

12. Solve n - 12 = -29.

F n = -46

H n = 17

G n = -17

J n = 46

13. Solve $\frac{g}{8} = -11$.

A q = -88

C $g = -1\frac{3}{8}$

B g = -3

D g = 19

14. Josephine withdrew \$281 from her savings account. The current balance is \$567. How much was the balance before her withdrawal?

F -\$286

H \$848

G \$286

J \$159,327

15. Solve -6 + g = 17.

A -23

C 23

B 11

D -11

Multiple Choice Test C, continued

16. Which decimal is equivalent to $\frac{8}{15}$?

F 1.875

H 0.53

G 0.815

J 0.5

17. Beth bought 22 trading cards, of which 20 were sports cards. Which decimal shows what portion of the cards were sports cards?

A 2.833

C 0.647

B 0.90

D 0.2833

18. Which decimal is equivalent to $\frac{5}{3}$?

F 0.58

H 0.625

G 0.85

J 0.375

19. Which group of decimals is in order from greatest to least?

A 0.702, 0.72, 0.207, 0.27

B 0.207, 0.27, 0.702, 0.72

C 0.702, 0.207, 0.72, 0.27

D 0.72, 0.702, 0.27, 0.207

20. Which number is the least?

F 0.39

G 0.203

21. Which number is greatest?

B 0.49

D 0.495

22. Which set of fractions is in order from least to greatest?

Free Response Test A

- 1. Which symbol, < , >, or =, makes the statement true? **-8** □ 7
- 2. Order the integers from least to greatest: 0, -14, 10.
- 3. Find the absolute value |-6|.
- 4. At 6 A.M. the temperature was -3 °C. In the afternoon, the temperature was 7 °C. What was the change of temperature during the day?
- 5. Evaluate a + b for a = 12 and b = -15.
- 6. Add 16 + (-9).
- 7. Evaluate a b for a = -7 and b = 14.

- 8. Subtract 19 (-21).
- 9. Multiply 3 (-8).
- 10. Divide $-72 \div (-9)$.
- 11. Simplify (−5) (−4).
- 12. Solve n 6 = -13.
- 13. Solve $\frac{g}{3} = -6$.
- 14. Paul withdrew \$43 from his savings account. The current balance is \$126. How much was the balance before his withdrawal?
- 15. Solve -9 + e = 28.

Free Response Test A, continued

- 16. Write the decimal that is equivalent
- 17. Rochelle bought 20 trading cards, of which 13 were sports cards. Write the decimal that shows what portion of the cards were sports cards.
- 18. Write a fraction that is equivalent to 0.20.
- 19. There were a total of 24 cars in a parking lot. Of those cars, 6 were blue. Write a decimal that shows the numbers of cars that were blue.

20. Which number is the least?

$$\frac{3}{8}$$
, 0.39, 0.246, $\frac{2}{5}$

- 21. Which number is greatest, $\frac{2}{3}$, 0.6, $\frac{3}{4}$, or 0.68?
- 22. Write the set of fractions in order from least to greatest $\frac{1}{3}$, $\frac{2}{5}$, $\frac{3}{8}$.

Free Response Test B

- 1. Which symbol, < , > or =, makes the statement true? –10 □ 19
- 2. Order the integers from least to greatest: 24, -11, 0, -13, -9.
- 3. Find |-13|.
- 4. At 6 A.M. the temperature was -14 °C. In the afternoon, the temperature was 2 °C. What was the change of temperature during the day?
- 5. Evaluate a + b for a = 35 and b = -18.
- 6. Add 26 + (-18).
- 7. Evaluate a b for a = -12 and b = 36.

- 8. Subtract 37 (-22).
- 9. Multiply 6 (-15).
- 10. Divide $-156 \div (-12)$.
- 11. Simplify –9 (4).
- 12. Solve n 15 = -35.
- 13. Solve $\frac{g}{4} = -12$.
- 14. Bill withdrew \$123 from his savings account. The current balance is \$456. How much was the balance before his withdrawal?
- 15. Solve -15 + j = 17.

Free Response Test B, continued

- 16. Write the decimal that is equivalent to $\frac{5}{8}$.
- 17. Michelle bought 80 trading cards. 36 of the cards were sports cards. Write the decimal that shows how many of the cards were sports cards.
- 18. Write a fraction that is equivalent to 0.85.
- 19. There were a total of 32 clowns in the parade. Of those clowns, 8 were wearing a hat. Write a decimal that shows the number of clowns that were wearing a hat.

- 20. Which number is the least? $0.675, \frac{4}{5}, 0.75, \frac{5}{8}$
- 21. Which number is greatest? $\frac{6}{10}$, 0.70, $\frac{9}{12}$, 0.72
- 22. Write the set of fractions in order from least to greatest.

$$\frac{10}{12}$$
, $\frac{8}{11}$, $\frac{7}{10}$

Free Response Test C

- 1. Which symbol, <, >, or =, makes the statement true? **−31** □ **47**
- 2. Order the integers from least to greatest: 56, -41, 3, -98, -74.
- 3. Find the absolute value |-351|.
- 4. At 6 A.M. the temperature was -32 °C. In the afternoon, the temperature was 27 °C. What was the change of temperature during the day?
- 5. Evaluate a + b for a = -78 and b = 56.
- 6. Add 52 + (-37).
- 7. Evaluate a b for a = -62 and b = 49.

- 8. Subtract 103 (-86).
- 9. Multiply 27 (-13).
- 10. Divide $-544 \div (-34)$.
- 11. Simplify (-23) (-54).
- 12. Solve n 68 = -112.
- 13. Solve $\frac{g}{15} = -22$.
- 14. Mark withdrew \$889 from his savings account. The current balance is \$741. How much was the balance before his withdrawal?
- 15. Solve -9 + t = 24.

Free Response Test C, continued

- 16. Write the decimal that is equivalent to $\frac{1}{16}$.
- 17. Sammy bought 36 trading cards, of which 8 were sports cards. Write the decimal that shows how many of the cards were sports cards.
- 18. Write a fraction that is equivalent to 0.35.
- 19. There were a total of 32 questions on a test. Of those questions, Sophie answered 28 correct. Write a decimal that shows the numbers of questions that she answered incorrectly.

20. Which number is the least?

$$\frac{2}{5}$$
, 0.39, $\frac{3}{8}$, 0.246

- 21. Which number is greatest, $\frac{17}{20}$, 0.78, $\frac{31}{40}$, or 0.87?
- 22. Write the set of fractions in order from least to greatest: $\frac{7}{9}$, $\frac{9}{11}$, $\frac{5}{8}$.

Integers and Rational Numbers

Answers

Section A Quiz

- 1. B
- 2. J
- 3. A
- 4. H
- 5. A
- 6. H
- 7. B
- 8. F
- 9. C
- 10. G

Section B Quiz

- 1. A
- 2. H
- 3. C
- 4. J
- 5. D
- 6. G
- 7. C

Multiple Choice Test A

- 1. D
- 2. A
- 3. B
- 4. D
- 5. D
- 6. B
- 7. B
- 8. A
- 9. A
- 10. A
- 11. B
- 12. B
- 13. D

- 14. B
- 15. B
- 16. D
- 17. A
- 18. B
- 19. D
- 20. B
- 21. D
- 22. A

Multiple Choice Test B

- 1. A
- 2. H
- 3. D
- 4. J
- 5. B
- 6. H
- 7. C
- 8. J
- 9. A
- 10. H
- 11. A
- 12. H
- 13. A
- 14. J
- 15. A
- 16. J
- 17. C
- 18. G
- 19. D
- 20. G
- 21. D
- 22. H

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Multiple Choice Test C

- 1. A
- 2. H
- 3. D
- 4. J
- 5. C
- 6. G
- 7. A
- 8. J
- 9. D
- 10. F
- 11. D
- 12. G
- 13. A
- 14. H
- 15. C
- 16. H
- 17. B
- 18. H
- 19. D
- 20. H
- 21. C
- 22. G

Free Response Test A

- 1. <
- 2. -14, 0, 10
- 3. 6
- 4. 10 °C
- 5. -3
- 6. 7
- 7. –21
- 8. 40
- 9. –24
- 10.8
- 11. 20
- 12. –7

- 13. –18
- 14. \$169
- 15. 37
- 16. 0.8
- 17. 0.65
- 18. $\frac{1}{5}$
- 19. 0.25
- 20. 0.246
- 21. $\frac{3}{4}$
- 22. $\frac{1}{3}$, $\frac{3}{8}$, $\frac{2}{5}$

Free Response Test B

- 1. <
- 2. -13, -11, -9, 0, 24
- 3. 13
- 4. 16 °C
- 5. 17
- 6.8
- 7. -48
- 8. 59
- 9. -90
- 10. 13
- 11. -36
- 12. -20
- 13. -48
- 14. \$579
- 15. 32
- 16. 0.625
- 17. 0.45
- 18. $\frac{17}{20}$
- 19. 0.25
- 20. $\frac{5}{8}$

21.
$$\frac{9}{12}$$

22.
$$\frac{7}{10}$$
, $\frac{8}{11}$, $\frac{10}{12}$

Free Response Topest C

- 1. <
- 2. -98, -74, -41, 3, 56
- 3. 351
- 4. 59°C
- 5. -22
- 6. 15
- 7. –111
- 8. 189
- 9. -351
- 10. 16
- 11. 1,242
- 12. -44
- 13. -330
- 14. \$1,630
- 15. 33
- 16. 0.0625
- 17. 0.2
- 18. $\frac{7}{20}$
- 19. 0.125
- 20. 0.246
- 21. 0.87
- 22. $\frac{5}{8}$, $\frac{7}{9}$, $\frac{9}{11}$

Performance Assessment

- 1. 8 tables × 14 chairs = 112 eighth graders
 - 12 tables \times 14 chairs = 168 seventh graders
- 2. 672 appetizers; 2 for each seventh-grader, 3 for each eighth-grader.

- 3. $\frac{3}{5}$ of the students are seventh graders.
- 4. x = (168 155) + (112 95); x = 30; 30 students did not attend.
- 5. The fraction of students expected to attend that are seventh graders is

$$\frac{168}{280} = \frac{60}{100}$$
. The fraction of students

who did attend that are seventh

graders is
$$\frac{155}{250} = \frac{62}{100} \cdot \frac{62}{100} > \frac{60}{100}$$
.

Cumulative Test

- 1. B
- 2. H
- 3. A
- 4. F
- 5. D
- 6. F
- 7. B
- 8. G
- 9. B
- 10. H
- 11. A
- 12. J
- 13. C
- 14. J
- 15. B 16. J
- 17. A
- 18. H
- 19. A
- 20. H
- 21. A
- 22. F
- 23. C
- 24. H
- 25. D
- 26. H