

**Applying Rational Numbers****Multiple Choice Test A****Choose the best answer.**

- Add  $36.8 + (-21.3)$ .  
A  $-15.06$                       B  $15.5$
- Subtract  $47.1 - (-33.5)$ .  
A  $80.6$                       B  $38.73$
- Mary has \$45 to spend on the school field trip. After paying \$33.50 for the cost of the field trip and \$9.75 for lunch, how much will she have left?  
A \$1.75                      C \$35.25  
B \$11.50                      D \$43.25
- Multiply  $3.9 \times 5.4$ .  
A  $16.2$                       C  $21.06$   
B  $19.5$                       D  $21.6$
- Multiply  $-9.3 \times 4.4$ .  
A  $-39.6$                       B  $-40.92$
- Richard's hourly salary is \$8.50. Last week he worked a 30-hour week. How much did he earn?  
A \$255                      B \$270
- Divide  $17.17 \div 8.5$ .  
A  $4$                       C  $2.3$   
B  $2.02$                       D  $1.98$
- Divide  $85.68 \div (-7.2)$ .  
A  $-12.14$                       B  $-11.9$
- Solve  $y + 7.2 = -8.6$ .  
A  $y = -15.8$                       C  $y = 1.4$   
B  $y = -1.4$                       D  $y = 15.8$
- Cynthia orders 27 prints of a photograph she took. It costs her a total of \$242.73. Which equation can be used to find how much each print cost?  
A  $\frac{c}{7} = 242.73$   
B  $c - 27 = 242.73$   
C  $27c = 242.73$   
D  $c = 242.73 \times 27$
- Solve  $x + 4.1 = 6.8$ .  
A  $2.7$                       C  $10.9$   
B  $1.66$                       D  $27.88$
- Add  $\frac{5}{6} + \frac{5}{6}$ .  
A  $\frac{10}{12}$                       C  $1\frac{2}{3}$   
B  $1\frac{4}{12}$                       D  $1\frac{10}{12}$

## CHAPTER

**Applying Rational Numbers****3****Multiple Choice Test A, continued**

13. Subtract  $\frac{7}{8} - \frac{1}{4}$ .

A  $\frac{5}{8}$

C  $\frac{5}{4}$

B  $\frac{9}{8}$

D  $1\frac{5}{8}$

14. Multiply  $\frac{2}{3} \cdot \frac{4}{5}$ .

A  $\frac{8}{15}$

C  $\frac{6}{8}$

B  $\frac{3}{4}$

D  $\frac{12}{10}$

15. Multiply  $3\frac{1}{4} \cdot \frac{7}{8}$ .

A  $3\frac{7}{32}$

C  $\frac{20}{12}$

B  $2\frac{27}{32}$

D  $\frac{20}{32}$

16. Karen works at a health food store. She has  $6\frac{1}{2}$  pounds of peanuts. She is splitting them into  $\frac{1}{8}$  pound packages. How many packages can she make?

A  $\frac{13}{16}$  packages

B 52 packages

17. Evaluate  $\frac{1}{6} \div \frac{1}{2}$ .

A  $\frac{1}{3}$

B  $\frac{2}{3}$

18. Solve  $x - 1\frac{3}{4} = 2\frac{1}{2}$ .

A  $x = \frac{1}{4}$

B  $x = 3\frac{1}{4}$

C  $x = 4\frac{1}{4}$

D  $x = 4\frac{1}{3}$

19. Solve  $\frac{2}{3}x = \frac{5}{8}$ .

A  $x = 1\frac{15}{16}$

B  $x = \frac{15}{16}$

C  $x = \frac{8}{15}$

D  $x = \frac{5}{12}$

**CHAPTER**

**3**

**Applying Rational Numbers**

**Multiple Choice Test B**

**Choose the best answer.**

1. Add  $52.14 + (-37.08)$ .  
 A  $-89.22$                       C  $15.06$   
 B  $-15.06$                         D  $89.22$
2. Subtract  $65.8 - (-27.07)$   
 F  $-92.87$                       H  $38.73$   
 G  $-38.73$                         J  $92.87$
3. Caroline has \$25 to spend on the school field trip. After paying \$13.00 for the cost of the field trip and \$6.25 for lunch, how much will she have left?  
 A \$5.75                              C \$12.50  
 B \$12.00                            D \$18.75
4. Multiply  $4.04 \times 7.1$ .  
 F 28                                    H 28.684  
 G 28.3204                          J 31.24
5. Multiply  $-6.8 \times 3.29$ .  
 A  $-223.72$                       C  $-22.372$   
 B  $-22.44$                          D  $22.372$
6. Bruno's hourly salary is \$6.75. Last week he worked a 20-hour week. How much did he earn?  
 F \$13.50                            H \$135  
 G \$120                                J \$140
7. Divide  $48.1 \div 6.5$ .  
 A  $-7.4$                               C  $7.4$   
 B  $7.385$                             D  $8.183$

8. Divide  $82.36 \div (-5.8)$ .  
 F  $-14.2$                             H  $14.2$   
 G  $13.667$                           J  $14.821$
9. Divide  $74.88 \div 12$ .  
 A  $6.24$                               C  $12.34$   
 B  $6.34$                               D  $62.88$
10. Django sells 14 CDs of his school band. He makes a total of \$193.06. Which equation can be used to find how much each CD was sold for?  
 F  $\frac{c}{14} = 193.06$   
 G  $c - 14 = 193.06$   
 H  $14c = 193.06$   
 J  $c = 193.06 \times 14$
11. Solve  $\frac{x}{3.2} = 5.7$ .  
 A 1.78                                C 8.9  
 B 18.24                              D 2.5
12. Add  $\frac{4}{5} + \frac{2}{3}$ .  
 F  $\frac{3}{4}$                                       H  $1\frac{7}{8}$   
 G  $1\frac{7}{15}$                                     J  $1\frac{7}{5}$

13. Subtract  $\frac{9}{14} - \frac{5}{8}$ .

A  $\frac{1}{0}$

C  $\frac{2}{3}$

B  $\frac{1}{56}$

D  $1\frac{15}{56}$

14. Multiply  $\frac{4}{7} \cdot \frac{5}{12}$ .

F  $\frac{20}{84}$

H  $\frac{6}{21}$

G  $\frac{5}{21}$

J  $\frac{1}{2}$

15. Multiply  $4\frac{1}{3} \cdot \frac{3}{8}$ .

A  $\frac{1}{8}$

C  $4\frac{1}{8}$

B  $1\frac{5}{8}$

D  $4\frac{3}{11}$

16. Marlene works at a bead store. She has  $4\frac{3}{4}$  pounds of beads. She is making  $\frac{1}{8}$  pound packages. How many packages will she be able to make?

F  $1\frac{1}{8}$  packages

H 32 packages

G 6 packages

J 38 packages

17. Divide  $6\frac{2}{3} \div \frac{4}{9}$ .

A  $\frac{7}{27}$

C  $2\frac{26}{27}$

B  $1\frac{1}{3}$

D 15

18. Solve  $x - 3\frac{1}{8} = \frac{5}{12}$ .

F  $x = \frac{13}{24}$

H  $x = 3\frac{13}{24}$

G  $x = 3\frac{6}{20}$

J  $x = 3\frac{17}{24}$

19. Solve  $\frac{9}{10}x = \frac{6}{25}$ .

A  $x = \frac{27}{125}$

C  $x = \frac{60}{225}$

B  $x = \frac{4}{15}$

D  $x = \frac{15}{35}$

**CHAPTER**

**3**

**Applying Rational Numbers**

**Multiple Choice Test C**

**Choose the best answer.**

1. Add  $87.38 + (-45.71)$ .  
 A  $-41.67$                       C  $44$   
 B  $41.67$                           D  $133.09$
2. Subtract  $74.46 - (-38.95)$ .  
 F  $-35.51$                       H  $36$   
 G  $35.51$                           J  $113.41$
3. Lisa has \$47 to spend on the school field trip. After paying \$28.60 for transportation and \$11.95 for lunch, how much will she have left?  
 A \$6.45                              C \$18.40  
 B \$16.65                            D \$87.55
4. Multiply  $8.24 \cdot 9.38$ .  
 F  $74.16$                           H  $76.26$   
 G  $75.04$                           J  $77.2912$
5. Multiply  $-5.18 \cdot 6.27$ .  
 A  $-33.6336$                       C  $-31.08$   
 B  $-32.4786$                       D  $39.0432$
6. Jesse's hourly salary is \$9.74. Last week he worked a 28.25-hour week. How much did he earn?  
 F \$275.16                          H \$272.72  
 G \$275.155                        J \$37.99
7. Divide  $79.352 \div 9.1$ .  
 A  $9$                                       C  $8.78$   
 B  $8.8169$                           D  $8.72$

8. Divide  $24.42 \div (-4.4)$ .  
 F  $-6.105$                           H  $5.55$   
 G  $-5.55$                             J  $6.105$
9. Solve  $y + 7.46 = -11.97$ .  
 A  $y = 19.43$                       C  $y = -4.51$   
 B  $y = 4.51$                         D  $y = -19.43$
10. Larry sells 17 CD's of his string quartet. He makes a total of \$237.83. Which equation can be used to find how much each CD was sold for?  
 F  $c = 237.83 \times (17)$   
 G  $c - 17 = 237.83$   
 H  $17c = 237.83$   
 J  $\frac{c}{17} = 237.83$
11. Solve  $-5.9x = 17.7$ .  
 A  $-6$                                       C  $-3$   
 B  $-5$                                       D  $3$
12. Add  $\frac{3}{10} + \frac{8}{35}$ .  
 F  $\frac{11}{70}$                                       H  $\frac{37}{70}$   
 G  $\frac{11}{45}$                                       J  $1\frac{1}{10}$

**CHAPTER**

**Applying Rational Numbers**

**3**

**Multiple Choice Test C, continued**

13. Subtract  $\frac{8}{15} - \frac{8}{25}$ .

A  $-\frac{1}{10}$

C  $\frac{16}{75}$

B  $\frac{0}{75}$

D  $\frac{16}{25}$

14. Multiply  $\frac{13}{15} \cdot \frac{5}{8}$ .

F  $\frac{13}{24}$

H  $\frac{63}{80}$

G  $\frac{18}{24}$

J  $\frac{24}{13}$

15. Multiply  $3\frac{7}{8} \cdot \frac{5}{6}$ .

A  $\frac{11}{48}$

C  $3\frac{9}{48}$

B  $2\frac{9}{48}$

D  $3\frac{11}{48}$

16. Tess works at a hardware store. She has  $8\frac{1}{4}$  pounds of beads. She is making  $\frac{3}{4}$  pound packages. How many packages will she be able to make?

F 22 packages

H  $\frac{11}{4}$  packages

G 11 packages

J  $\frac{3}{4}$  packages

17. Evaluate  $\frac{8}{9} \cdot \frac{11}{12} \div \frac{4}{5}$ .

A  $\frac{1}{54}$

C  $1\frac{1}{54}$

B  $\frac{22}{27}$

D  $\frac{110}{54}$

18. Solve  $x - 7\frac{5}{6} = 3\frac{9}{24}$ .

F  $x = 11\frac{5}{24}$

H  $x = \frac{29}{24}$

G  $x = 10\frac{5}{24}$

J  $x = \frac{5}{24}$

19. Solve  $\frac{7}{8}x = \frac{9}{10}$ .

A  $x = \frac{63}{80}$

C  $x = 1\frac{1}{35}$

B  $x = 1\frac{1}{36}$

D  $x = 1\frac{63}{80}$

**CHAPTER**

**3**

**Applying Rational Numbers**

**Free Response Test A**

1. Add  $22.7 + (-18.6)$ .

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2. Subtract  $35.8 - (-17.9)$ .

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3. Cassie has \$32 to spend on the school field trip. After paying \$21.75 for the cost of the field trip and \$7.25 for lunch, how much will she have left?

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4. Multiply  $2.8 \times 3.5$ .

\_\_\_\_\_

5. Multiply  $-5.3 \times 6.1$ .

\_\_\_\_\_

6. Helen's hourly salary is \$9.75. Last week she worked a 25-hour week. How much did she earn?

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7. Divide  $67.45 \div 7.1$ .

\_\_\_\_\_

8. Divide  $85.68 \div (-7.2)$ .

\_\_\_\_\_

9. Solve  $y + 9.4 = -11.7$ .

\_\_\_\_\_

10. Terry buys 8 copies of a book for presents for friends. It costs her a total of \$119.60. Write an equation that can be used to find out how much each book was sold for.

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11. Solve  $x + 1.25 = 6.8$ .

\_\_\_\_\_

12. Add  $\frac{7}{8} + \frac{2}{3}$ .

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13. Subtract  $\frac{4}{5} - \frac{2}{3}$ .

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14. Multiply  $\frac{4}{5} \cdot \frac{7}{8}$ .

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**CHAPTER**

**Applying Rational Numbers**

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**Free Response Test A, continued**

15. Multiply  $2\frac{2}{5} \cdot \frac{3}{4}$ .

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16. Nate works at a grocery store. He has  $7\frac{1}{2}$  pounds of raisins. He is splitting them into  $\frac{1}{8}$  pound packages. How many packages can he make?

\_\_\_\_\_

17. Evaluate  $\frac{1}{4} \cdot \frac{1}{5} \div \frac{1}{10}$ .

\_\_\_\_\_

18. Solve  $x - 3\frac{7}{8} = 5\frac{3}{4}$ .

\_\_\_\_\_

19. Solve  $\frac{7}{12}x = \frac{3}{4}$ .

\_\_\_\_\_

CHAPTER

3

# Applying Rational Numbers

## Free Response Test B

1. Add  $41.94 + (-27.32)$ .

\_\_\_\_\_

2. Subtract  $73.56 - (-38.84)$ .

\_\_\_\_\_

3. Valentina has \$41 to spend on the school field trip. After paying for the \$28.45 for the cost of the field trip and \$8.72 for lunch, how much will she have left?

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4. Multiply  $5.12 \times 9.1$ .

\_\_\_\_\_

5. Multiply  $-8.2 \times 4.24$ .

\_\_\_\_\_

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6. Rikki's hourly salary is \$9.64. Last week she worked a 22-hour week. How much did she earn?

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7. Divide  $152.46 \div 24.2$ .

\_\_\_\_\_

8. Divide  $37.17 \div (-4.5)$ .

\_\_\_\_\_

9. Divide  $54.91 \div 17$ .

\_\_\_\_\_

10. Harrison sells 23 CDs of his rock band. He makes a total of \$297.85. Write an equation that can be used to find out how much each CD was sold for.

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**CHAPTER**

**Applying Rational Numbers**

**3**

**Free Response Test B, continued**

11. Solve  $\frac{x}{1.6} = 12$ .

\_\_\_\_\_

12. Add  $\frac{3}{10} + \frac{8}{15}$ .

\_\_\_\_\_

13. Subtract  $\frac{7}{12} - \frac{9}{20}$ .

\_\_\_\_\_

14. Multiply  $\frac{7}{10} \cdot \frac{4}{5}$ .

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15. Multiply  $5\frac{5}{9} \cdot \frac{3}{5}$ .

\_\_\_\_\_

16. Karen works at a toy store. She has  $2\frac{7}{8}$  pounds of marbles. She is making  $\frac{1}{16}$  pound packages. How many packages will she make?

\_\_\_\_\_

17. Divide  $10\frac{4}{5} \div \frac{3}{5}$ .

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18. Solve  $x - 8\frac{5}{6} = \frac{7}{12}$ .

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19. Solve  $\frac{8}{9}x = \frac{23}{30}$ .

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**CHAPTER**

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**Applying Rational Numbers**

**Free Response Test C**

1. Add  $91.45 + (-54.19)$ .

\_\_\_\_\_

2. Subtract  $67.23 - (-56.89)$ .

\_\_\_\_\_

3. Larry has \$39.45 to spend on the school field trip. After paying \$26.95 for transportation and \$9.82 for lunch, how much will he have left?

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4. Multiply  $7.67 \cdot 8.53$ .

\_\_\_\_\_

5. Multiply  $-4.66 \cdot 8.38$ .

\_\_\_\_\_

6. Johnny's hourly salary is \$12.31. Last week he worked a 32.75-hour week. How much did he earn?

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7. Divide  $27.195 \div 3.5$ .

\_\_\_\_\_

8. Divide  $49.155 \div (-8.7)$ .

\_\_\_\_\_

9. Solve  $y + 6.17 = -31.58$ .

\_\_\_\_\_

10. Richard sells 24 CD's of his bluegrass band. He makes a total of \$238.80. Write an equation that can be used to find how much each CD was sold for.

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11. Solve  $9.6x = -42$ .

\_\_\_\_\_

12. Add  $\frac{4}{7} + \frac{12}{21}$ .

\_\_\_\_\_

13. Subtract  $\frac{9}{25} - \frac{3}{10}$ .

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**CHAPTER**

**Applying Rational Numbers**

**3**

**Free Response Test C, continued**

14. Multiply  $\frac{15}{16} \cdot \frac{22}{25}$ .

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15. Multiply  $2\frac{6}{7} \cdot \frac{35}{36}$ .

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16. Lucy works at a bakery store.  
 She has  $9\frac{4}{5}$  pounds of cookies.  
 She is making  $\frac{1}{4}$  pound packages.  
 How many full packages will she be able to make?

\_\_\_\_\_

17. Evaluate  $\frac{2}{7} \cdot \frac{9}{15} \div \frac{3}{4}$ .

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18. Solve  $x - 5\frac{7}{8} = 7\frac{5}{6}$ .

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19. Solve  $\frac{4}{7}x = \frac{8}{35}$ .

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# Applying Rational Numbers

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## Answers

### Section A Quiz

1. C
2. G
3. A
4. J
5. A
6. G
7. B
8. J

### Section B Quiz

1. B
2. F
3. C
4. G
5. B
6. J
7. B

### Multiple Choice Test A

1. B
2. A
3. A
4. C
5. B
6. A
7. B
8. B
9. A
10. C
11. A
12. C
13. A
14. A
15. B
16. B

17. A
18. C
19. B

### Multiple Choice Test B

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

**Multiple Choice Test C**

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

**Free Response Test A**

1. 4.1
2. 53.7
3. \$3
4. 9.8
5. -32.33
6. \$243.75
7. 9.5
8. -11.9
9. -21.1
10.  $8b = \$119.60$
11. 5.55
12.  $1\frac{13}{24}$
13.  $\frac{2}{15}$

14.  $\frac{7}{10}$

15.  $1\frac{4}{5}$

16. 60

17.  $\frac{1}{2}$

18.  $9\frac{5}{8}$

19.  $1\frac{2}{7}$

**Free Response Test B**

1. 14.62
2. 112.4
3. \$3.83
4. 46.592
5. -34.768
6. \$212.08
7. 6.3
8. -8.26
9. 3.23
10.  $23c = \$297.85$
11. 19.2
12.  $\frac{5}{6}$
13.  $\frac{2}{15}$
14.  $\frac{14}{25}$
15.  $3\frac{1}{3}$
16. 46 packages
17. 18
18.  $9\frac{5}{12}$
19.  $\frac{69}{80}$

### Free Response Test C

1. 37.26
2. 124.12
3. \$2.68
4. 65.4251
5. -39.0508
6. \$403.15
7. 7.77
8. -5.65
9. -37.75
10.  $24c = \$238.80$
11. -4.375
12.  $1\frac{1}{7}$
13.  $\frac{3}{50}$
14.  $\frac{33}{40}$
15.  $2\frac{7}{9}$
16. 39
17.  $\frac{8}{35}$
18.  $13\frac{17}{24}$
19.  $\frac{2}{5}$

### Performance Assessment

1. 8.5 ft, 11 ft, 8.125 ft
2. Possible answer: Cut the board in half lengthwise to make two boards, each 18.75 ft by 1.75 ft. From one piece, cut two 4.25 ft pieces for the top and bottom and two 4.0625 ft pieces for the shelves. From the the other piece, cut two 5.5 ft pieces for the sides.

3. Possible answer: There is one piece of board that is 2.125 ft by 1.75 ft, and another piece of board that is 7.75 ft by 1.75 ft.

### Cumulative Test

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