Exam

Name_____

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

Insert <, >, or = to make the statement true.

1) $-\dfrac{7}{23}$ _____ $-\dfrac{5}{23}$ 1) _____

    A) =   B) >   C) <

Answer: C

Write the phrase as an algebraic expression. Let x represent the unknown number.

2) The product of a number and 18   2) _____

    A) x + 18   B) 18x   C) $\dfrac{x}{18}$ D) x - 18

Answer: B

Add or subtract as indicated. Write the answer in lowest terms.

3) $\dfrac{3}{10} + \dfrac{1}{12}$ 3) _____

    A) $\dfrac{23}{22}$ B) $\dfrac{23}{60}$ C) $\dfrac{1}{15}$ D) $\dfrac{19}{60}$

Answer: B

Solve the problem.

4) An angle measuring 90° is shown and an angle measuring 60° is shown. Use the inequality symbol   4) _____
   ≤ or ≥ to write a statement comparing the numbers 90 and 60.

    A) 90 ≥ 60   B) 90 ≤ 60

Answer: A

Tell whether the statement is true or false.

5) $\dfrac{1}{4}$ is an integer.   5) _____

    A) True   B) False

Answer: B

Simplify the expression.

6) $\dfrac{173 + 7}{3^2 - 4}$ 6) _____

    A) 54   B) 36   C) 90   D) 34

Answer: B

Write the phrase as an algebraic expression. Let x represent the unknown number.

7) Six more than a number

    A) $\dfrac{x}{6}$ B) x – 6   C) 6x   D) x + 6

7) _____

Answer: D

Decide whether the given number is a solution of the given equation.

8) Is 0 a solution of x = 6x – 30?

    A) yes   B) no

8) _____

Answer: B

Write the number as a product of primes.

9) 33

    A) 3 · 3· 11   B) 3 · 11   C) 3 · 13   D) 2 · 3 · 13

9) _____

Answer: B

Write the sentence as a mathematical statement.

10) Negative thirty-eight is equal to negative thirty-eight.

    A) –38 ≥ –38   B) –38 ≤ –38   C) –38 = –38   D) –38 ≠ –38

10) _____

Answer: C

Multiply or divide as indicated. Write the answer in lowest terms.

11) $\dfrac{4}{8} \div \dfrac{9}{14}$

    A) $\dfrac{13}{22}$ B) $\dfrac{7}{9}$ C) $\dfrac{9}{112}$ D) $12\dfrac{4}{9}$

11) _____

Answer: B

Answer the question according to what the textbook states.

12) Which of these is NOT listed as a tip to help you succeed in this course?

    A) Know how to get help if you need it.
    B) Form study groups and/or exchange names and e-mail addresses.
    C) Read your textbook after you attend class.
    D) Choose to attend all class periods and do your homework.

12) _____

Answer: C

Add or subtract as indicated. Write the answer in lowest terms.

13) $\dfrac{46}{91} - \dfrac{38}{91}$

    A) $19\dfrac{19}{91}$ B) $\dfrac{12}{13}$ C) $\dfrac{8}{91}$ D) $\dfrac{4}{91}$

13) _____

Answer: C

Simplify the expression.

14) $\dfrac{1}{4} + \dfrac{1}{7} \cdot \dfrac{1}{5}$

    A) $\dfrac{11}{140}$ B) $\dfrac{1}{70}$ C) $\dfrac{39}{140}$ D) $\dfrac{33}{28}$

14) _____

Answer: C

Solve. Simplify the answer.

15) Last week, Samantha ran 18 miles. This week, she ran $16\frac{1}{2}$ miles. How much more did she run last week?

15) _____

A) $1\frac{1}{2}$ mi

B) $1\frac{7}{11}$ mi

C) $34\frac{1}{2}$ mi

D) $25\frac{1}{2}$ mi

Answer: A

Multiply or divide as indicated. Write the answer in lowest terms.

16) $3 \cdot 2\frac{7}{15}$

16) _____

A) $7\frac{2}{5}$

B) 6

C) $6\frac{2}{5}$

D) $6\frac{7}{15}$

Answer: A

Write the sentence as an equation or inequality. Use x to represent any unknown number.

17) The sum of 10 and twice a number is 46.

17) _____

A) $10 + 2x = 46$

B) $10x - 2 = 46$

C) $46 + 2x = 10$

D) $10x + 2 = 46$

Answer: A

Find the absolute value of the number.

18) $|19|$

18) _____

A) -19

B) 19

C) 0

D) 38

Answer: B

Evaluate the expression when x = 2, y = 1, and z = 4.

19) $\frac{y}{3x}$

19) _____

A) $\frac{y}{6}$

B) $\frac{1}{6}$

C) 6

D) $\frac{2}{3}$

Answer: B

Insert <, >, or = to make the statement true.

20) $-|-20|$ ____ $-|-32|$

20) _____

A) >

B) =

C) <

Answer: A

Simplify the expression.

21) $\frac{7}{4} \cdot \frac{1}{6} + \frac{4}{5} \cdot \frac{1}{4}$

21) _____

A) $\frac{13}{30}$

B) $\frac{59}{120}$

C) $\frac{59}{72}$

D) $\frac{59}{88}$

Answer: B

Multiply or divide as indicated. Write the answer in lowest terms.

22) $\dfrac{4}{19} \div \dfrac{3}{14}$

    A) $\dfrac{18}{19}$ B) $\dfrac{55}{57}$ C) $\dfrac{56}{55}$ D) $\dfrac{56}{57}$

    Answer: D

Use an integer to represent the value in the statement.

23) a climb of 103 feet up a shear mountain cliff

    A) 103   B) -103

    Answer: A

Add or subtract as indicated. Write the answer in lowest terms.

24) $\dfrac{5}{8} - \dfrac{8}{11} + \dfrac{1}{2}$

    A) $\dfrac{35}{44}$ B) $\dfrac{35}{88}$ C) $\dfrac{163}{88}$ D) $\dfrac{35}{176}$

    Answer: B

Solve. Simplify the answer.

25) To obtain a certain shade of paint, Peter mixed 10 gallons of white paint with $2\dfrac{1}{2}$ gallons of brown paint and 3 gallons of blue paint. How much paint did he have?

    A) $15\dfrac{1}{2}$ gal   B) $\dfrac{2}{31}$ gal   C) $4\dfrac{1}{5}$ gal   D) $\dfrac{5}{21}$ gal

    Answer: A

26) Jeffrey has two packages. One weighs $2\dfrac{1}{4}$ ounces, and the other weighs $\dfrac{5}{9}$ of an ounce. What is the total weight of the two packages?

    A) $2\dfrac{29}{36}$ oz   B) $1\dfrac{1}{13}$ oz   C) $1\dfrac{1}{4}$ oz   D) $4\dfrac{9}{13}$ oz

    Answer: A

Write the sentence as an equation or inequality. Use x to represent any unknown number.

27) Four subtracted from thirteen is equal to three squared.

    A) $13 - 4 = 2 \cdot 3$ B) $4 - 13 = 2 \cdot 3$ C) $13 - 4 = 3^2$ D) $4 - 13 = 3^2$

    Answer: C

Write the fraction as an equivalent fraction with the given denominator.

28) $\dfrac{2}{3}$ with a denominator of 21

    A) $\dfrac{2}{21}$ B) $\dfrac{14}{21}$ C) $\dfrac{6}{21}$ D) $\dfrac{7}{21}$

    Answer: B

Multiply or divide as indicated. Write the answer in lowest terms.

29) $3\frac{1}{3} \cdot 4\frac{1}{6}$ 29) _____

   A) $1\frac{1}{9}$ B) $12\frac{1}{18}$ C) $13\frac{8}{9}$ D) $13\frac{13}{18}$

   Answer: C

Write the sentence as an equation or inequality. Use x to represent any unknown number.

30) The sum of 21 and a number is 36.   30) _____
   A) 36 + 21 = x   B) 21 - x = 36   C) 21 + x = 36   D) 21 = 36 + x

   Answer: C

Answer the question according to what the textbook states.

31) Which of these is the most important general tip for success in a mathematics course?   31) _____
   A) Check your work   B) Do your homework
   C) Don't be afraid to ask questions   D) Organize your class materials
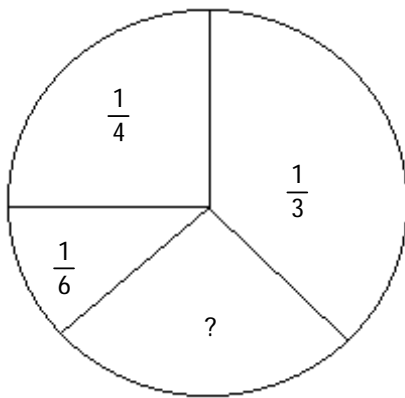
   Answer: D

The circle represents a whole, or 1. Use subtraction to determine the unknown part of the circle.

32)   32) _____

   A) $\frac{1}{2}$ B) $\frac{1}{4}$ C) $\frac{3}{4}$ D) $\frac{1}{3}$

   Answer: B

Solve. Simplify the answer.

33) The total length of a boat race is $\frac{6}{11}$ of a mile. Chloe has completed $\frac{5}{11}$ of a mile. How much does   33) _____

   she have left to complete?
   A) $\frac{6}{11}$ mi   B) $\frac{5}{11}$ mi   C) $\frac{1}{11}$ mi   D) 1 mi

   Answer: C

Multiply or divide as indicated. Write the answer in lowest terms.

34) $\frac{20}{9} \cdot \frac{1}{8}$

34) _____

    A) $\frac{3}{18}$ B) $\frac{146}{72}$ C) $\frac{41}{18}$ D) $\frac{5}{18}$

Answer: D

Write the phrase as an algebraic expression. Let x represent the unknown number.

35) Eight subtracted from a number

35) _____

    A) x + 8   B) 8x   C) x - 8   D) 8 - x

Answer: C

Insert <, >, or = to make the statement true.

36) 7 ___ 0

36) _____

    A) <   B) >   C) =

Answer: B

37) $|-8|$ ___ $|1|$

37) _____

    A) =   B) >   C) <

Answer: B

38) -5.0 ___ -8.2

38) _____

    A) <   B) >   C) =

Answer: B

Is the following statement true or false?

39) 21 > 25

39) _____

    A) True   B) False

Answer: B

Write the sentence as an equation or inequality. Use x to represent any unknown number.

40) Four subtracted from a number is 0.

40) _____

    A) 4x = 0   B) x + 4 = 0   C) 4 - x = 0   D) x - 4 = 0

Answer: D

Multiply or divide as indicated. Write the answer in lowest terms.

41) $\frac{5}{3} \div 20$

41) _____

    A) $\frac{1}{4}$ B) $33\frac{1}{3}$ C) $\frac{1}{12}$ D) 12

Answer: C

Tell which set or sets the number belongs to: natural numbers, whole numbers, integers, rational numbers, irrational numbers, and real numbers.

42) 16

42) _____

    A) real   B) natural, whole, integer, rational, real
    C) integer, rational, real   D) whole, rational, real

Answer: B

Tell whether the statement is true or false.

43) Some rational numbers are irrational.   43) _____
   A) True   B) False

   Answer: B

Find the absolute value of the number.

44) $|0|$ 44) _____
   A) does not exist   B) 0

   Answer: B

Multiply or divide as indicated. Write the answer in lowest terms.

45) $\frac{8}{11} \div \frac{2}{19}$ 45) _____

   A) $\frac{1}{3}$ B) $\frac{16}{209}$ C) $\frac{76}{11}$ D) $\frac{209}{16}$

   Answer: C

Evaluate the expression for the given replacement values.

46) $\frac{y}{z} + 2x^2$ $x = 7, y = 16, z = 8$ 46) _____

   A) 102   B) 100   C) 51   D) 130

   Answer: B

Evaluate.

47) $(0.3)^2$ 47) _____
   A) 0.15   B) 0.6   C) 9   D) 0.09

   Answer: D

Add or subtract as indicated. Write the answer in lowest terms.

48) $6\frac{1}{3} + 14\frac{5}{8}$ 48) _____

   A) $21\frac{23}{24}$ B) $19\frac{23}{24}$ C) $20\frac{23}{24}$ D) $6\frac{23}{24}$

   Answer: C

49) $15\frac{2}{7} - 7\frac{4}{7}$ 49) _____

   A) $22\frac{5}{7}$ B) $7\frac{5}{7}$ C) $21\frac{5}{7}$ D) $7\frac{4}{7}$

   Answer: B

Tell whether the statement is true or false.

50) Some real numbers are integers.   50) _____
   A) True   B) False

   Answer: A

Evaluate the expression for the given replacement values.

51) Neglecting air resistance, the expression $16t^2$ gives the distance in feet an object will fall in t seconds. Complete the chart below.

51) _____

Time t (in seconds)	Distance $16t^2$ (in feet)
1	
2	
3	

A)

Time t (in seconds)	Distance $16t^2$ (in feet)
1	16
2	64
3	144

B)

Time t (in seconds)	Distance $16t^2$ (in feet)
1	16
2	144
3	400

C)

Time t (in seconds)	Distance $16t^2$ (in feet)
1	64
2	144
3	256

D)

Time t (in seconds)	Distance $16t^2$ (in feet)
1	16
2	32
3	48

Answer: A

Add or subtract as indicated. Write the answer in lowest terms.

52) $5\frac{7}{20} - 3\frac{1}{16}$

52) _____

A) $2\frac{3}{40}$ B) $2\frac{27}{80}$ C) $1\frac{23}{80}$ D) $2\frac{23}{80}$

Answer: D

53) $\frac{3}{5} + \frac{3}{25}$

53) _____

A) $\frac{6}{25}$ B) $\frac{91}{125}$ C) $\frac{1}{5}$ D) $\frac{18}{25}$

Answer: D

Use an integer to represent the value in the statement.

54) The team gave up 9 points.

54) _____

A) -9   B) 9

Answer: A

55) 473 feet above sea level

55) _____

A) -473   B) 473

Answer: B

Insert <, >, or = to make the statement true.

56) 0.2 _____ 0.3

    A) =   B) >   C) <

Answer: C

56) _____

Solve the problem.

57) On Tuesday, the temperature was 59° Fahrenheit. On Thursday, the temperature was 47° Fahrenheit. Write an inequality statement using < or > comparing the numbers 59 and 47.

    A) 59 > 47   B) 59 < 47

Answer: A

57) _____

Write the number as a product of primes.

58) 84

    A) $2 \cdot 2 \cdot 2 \cdot 3 \cdot 7$ B) $2 \cdot 3 \cdot 7$ C) $2 \cdot 2 \cdot 3 \cdot 7$ D) $2 \cdot 2 \cdot 3 \cdot 5$

Answer: C

58) _____

Write the fraction in lowest terms.

59) $\frac{4}{5}$

    A) $\frac{1}{1}$ B) $\frac{1}{5}$ C) $\frac{1}{4}$ D) $\frac{4}{5}$

Answer: D

59) _____

Insert <, >, or = to make the statement true.

60) 7 _____ -8

    A) <   B) >   C) =

Answer: B

60) _____

Evaluate the expression for the given replacement values.

61) $\frac{4x}{y} + y^2$ x = 5, y = 10

    A) 12   B) 102   C) 33   D) 4

Answer: B

61) _____

Solve. Simplify the answer.

62) Angie is wrapping a present for her nephew. She has a roll of wrapping paper that has 13 feet of wrapping paper on the roll. She uses $8\frac{2}{3}$ feet to wrap the present. How many feet of wrapping paper are left on the roll?

    A) $4\frac{1}{3}$ ft   B) $5\frac{2}{3}$ ft   C) $5\frac{1}{3}$ ft   D) $12\frac{1}{3}$ ft

Answer: A

62) _____

Multiply or divide as indicated. Write the answer in lowest terms.

63) $\frac{2}{7} \cdot \frac{5}{9}$

    A) $\frac{10}{63}$ B) $1\frac{17}{18}$ C) $6\frac{3}{10}$ D) $\frac{18}{35}$

Answer: A

63) _____

Add or subtract as indicated. Write the answer in lowest terms.

64) $20\frac{3}{4} - \frac{14}{16}$

64) _____

    A) $20\frac{7}{8}$ B) $19\frac{7}{8}$ C) $18\frac{7}{8}$ D) 19

Answer: B

Write the phrase as an algebraic expression. Let x represent the unknown number.

65) The quotient of 14 and a number

65) _____

    A) $14x$ B) $x - 14$ C) $\frac{14}{x}$ D) $\frac{x}{14}$

Answer: C

Solve. Simplify the answer.

66) A Boeing 767 flew 920 miles on a nonstop flight. On the return flight, it landed after having flown $530\frac{8}{9}$ miles. How far was the plane from its original point of departure?

66) _____

    A) $390\frac{1}{9}$ mi   B) $389\frac{8}{9}$ mi   C) $389\frac{1}{9}$ mi   D) $390\frac{8}{9}$ mi
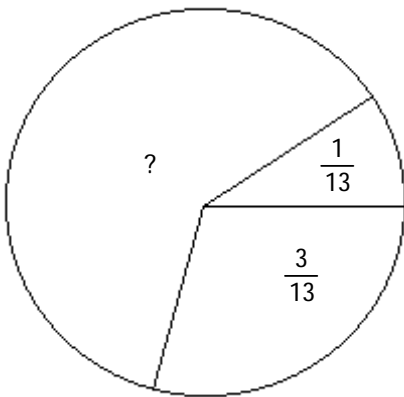
Answer: C

The circle represents a whole, or 1. Use subtraction to determine the unknown part of the circle.

67)

67) _____

    A) $\frac{11}{13}$ B) $\frac{15}{13}$ C) $\frac{9}{13}$ D) $\frac{4}{13}$

Answer: C

Add or subtract as indicated. Write the answer in lowest terms.

68) $\frac{4}{9} + \frac{4}{9}$

68) _____

    A) $\frac{9}{10}$ B) $\frac{7}{9}$ C) $\frac{8}{9}$ D) $\frac{7}{8}$

Answer: C

Multiply or divide as indicated. Write the answer in lowest terms.

69) $5\frac{4}{5} \div \frac{1}{5}$

69) _____

    A) 9   B) $25\frac{4}{5}$ C) 29   D) $1\frac{4}{25}$

Answer: C

Insert <, >, or = to make the statement true.

70) -200 _____ -20

70) _____

    A) >   B) =   C) <

Answer: C

Use an integer to represent the value in the statement.

71) 43° above zero

71) _____

    A) -43   B) 43

Answer: B

Decide whether the given number is a solution of the given equation.

72) Is 8 a solution of x + 4 = 12?

72) _____

    A) yes   B) no

Answer: A

Simplify the expression.

73) 16 · 19 + 12 · 15

73) _____

    A) 7440   B) 3184   C) 484   D) 4740

Answer: C

Add or subtract as indicated. Write the answer in lowest terms.

74) $14\frac{1}{5} + 6\frac{2}{7}$

74) _____

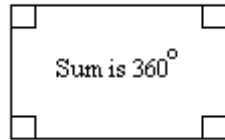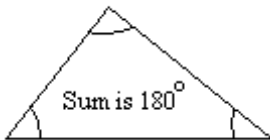   A) $21\frac{17}{35}$ B) $19\frac{17}{35}$ C) $14\frac{17}{35}$ D) $20\frac{17}{35}$

Answer: D

Solve the problem.

75) The sum of the measures of the angles of a triangle is 180°. The sum of the measures of the angles of a rectangle is 360°. Use the inequality symbol ≤ or ≥ to write a statement comparing the numbers 180 and 360.

75) _____

Sum is 180°

Sum is 360°

    A) 180 ≥ 360   B) 180 ≤ 360

Answer: B

Add or subtract as indicated. Write the answer in lowest terms.

76) $\dfrac{8}{11} + \dfrac{3}{11}$

    A) $\dfrac{1}{2}$ B) $\dfrac{11}{11}$ C) $\dfrac{11}{22}$ D) 1

76) _____

Answer: D

Multiply or divide as indicated. Write the answer in lowest terms.

77) $2\dfrac{1}{7} \cdot \dfrac{1}{5}$

    A) $\dfrac{3}{7}$ B) $\dfrac{1}{7}$ C) $1\dfrac{3}{7}$ D) $2\dfrac{1}{35}$

77) _____

Answer: A

Insert <, >, or = to make the statement true.

78) $|-5|$ ____ $|5|$

    A) >   B) <   C) =

78) _____

Answer: C

Is the following statement true or false?

79) $4 \cdot 7 \le 7 + 11$

    A) True   B) False

79) _____

Answer: B

Use an integer to represent the value in the statement.

80) $196 profit

    A) 196   B) -196

80) _____

Answer: A

Multiply or divide as indicated. Write the answer in lowest terms.

81) $5\dfrac{2}{9} \div \dfrac{1}{9}$

    A) 48   B) $45\dfrac{1}{2}$ C) 46   D) 47

81) _____

Answer: D

Write the sentence as an equation or inequality. Use x to represent any unknown number.

82) One increased by two equals the quotient of twelve and four.

    A) $1 + 2 = 4 \div 12$ B) $1 + 2 = 12 - 4$ C) $1 + 2 = 12 \cdot 4$ D) $1 + 2 = 12 \div 4$

82) _____

Answer: D

Evaluate the expression when x = 2, y = 1, and z = 4.

83) $6z$

    A) 24   B) 6   C) 4   D) 10

83) _____

Answer: A

Write the fraction as an equivalent fraction with the given denominator.

84) $\frac{3}{7}$ with a denominator of 35
84) _____

    A) $\frac{15}{35}$ B) $\frac{3}{35}$ C) $\frac{5}{35}$ D) $\frac{21}{35}$

    Answer: A

Is the following statement true or false?

85) $17 \geq 6$
85) _____

    A) True   B) False

    Answer: A

Simplify the expression.

86) $|-7| + |24 + 16|$
86) _____

    A) 55   B) 33   C) 15   D) 47

    Answer: D

Insert <, >, or = to make the statement true.

87) -54 _____ -43
87) _____

    A) =   B) >   C) <

    Answer: C

Decide whether the given number is a solution of the given equation.

88) Is 9 a solution of $x - 5 = x - 4$?
88) _____

    A) yes   B) no

    Answer: B

Tell which set or sets the number belongs to: natural numbers, whole numbers, integers, rational numbers, irrational numbers, and real numbers.

89) -13
89) _____

    A) real   B) whole, real

    C) integer, rational, real   D) irrational, real

    Answer: C

Solve. Simplify the answer.

90) A laminated lab bench has $1\frac{1}{8}$ inches of plywood, $1\frac{1}{5}$ inches of pressed board, and $\frac{1}{2}$ of an inch of formica. What is the thickness of the lab bench?
90) _____

    A) $\frac{21}{25}$ in.   B) $2\frac{33}{40}$ in.   C) $1\frac{4}{21}$ in.   D) $\frac{40}{113}$ in.

    Answer: B

91) Brian was training to run a marathon. During the three-day period before the race he decided that he would train for a total of 9 hours. If he trained for $1\frac{4}{5}$ hours on the first day and $3\frac{9}{10}$ hours on the second day, how many hours would he need to train on the third day?
91) _____

    A) $3\frac{2}{5}$ hr   B) $4\frac{3}{10}$ hr   C) $3\frac{3}{10}$ hr   D) $3\frac{7}{10}$ hr

    Answer: C

Write the fraction in lowest terms.

92) $\dfrac{30}{75}$　　　　　　　　　　　　　　　　　　　　　　　　　　　92) _____

   A) $\dfrac{2}{5}$　　　　　　B) $\dfrac{2}{15}$　　　　　　C) $\dfrac{15}{5}$　　　　　　D) $\dfrac{30}{75}$

   Answer: A

Write the sentence as a mathematical statement.

93) Negative fifty-two is less than negative thirteen.　　　　　　　　　93) _____
   A) $-52 < -13$　　　　B) $-52 < 13$　　　　C) $-52 \le -13$　　　　D) $-52 > -13$

   Answer: A

Write the fraction in lowest terms.

94) $\dfrac{30}{80}$　　　　　　　　　　　　　　　　　　　　　　　　　　94) _____

   A) $\dfrac{30}{80}$　　　　　B) $\dfrac{3}{10}$　　　　　C) $\dfrac{3}{8}$　　　　　D) $\dfrac{10}{8}$

   Answer: C

Solve. Simplify the answer.

95) The front cover of a book measures $9\dfrac{1}{2}$ inches by $7\dfrac{3}{5}$ inches. What is the total distance around (the　95) _____

   perimeter of) the front cover of the book?

   A) $33\dfrac{3}{5}$ in.　　　　B) $33\dfrac{2}{5}$ in.　　　　C) $17\dfrac{1}{10}$ in.　　　　D) $34\dfrac{1}{5}$ in.

   Answer: D

Add or subtract as indicated. Write the answer in lowest terms.

96) $\dfrac{9}{16} - \dfrac{1}{12}$　　　　　　　　　　　　　　　　　　　　　96) _____

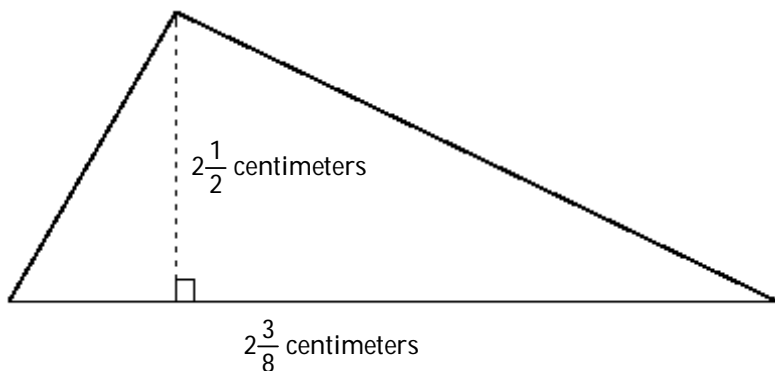   A) $\dfrac{13}{24}$　　　　　B) $\dfrac{1}{6}$　　　　　C) $\dfrac{23}{48}$　　　　　D) $\dfrac{23}{192}$

   Answer: C

Find the area of the figure below. (The area of a rectangle is the product of its length and width. The area of a triangle is $\frac{1}{2}$ the product of its base and height.)

97)

97) _____

$2\frac{1}{2}$ centimeters

$2\frac{3}{8}$ centimeters

A) $4\frac{7}{8}$ sq cm

B) $2\frac{31}{32}$ sq cm

C) $11\frac{7}{8}$ sq cm

D) $5\frac{15}{16}$ sq cm

Answer: B

Write the fraction in lowest terms.

98) $\frac{18}{30}$

98) _____

A) $\frac{3}{5}$

B) $\frac{18}{30}$

C) $\frac{3}{6}$

D) $\frac{6}{5}$

Answer: A

99) $\frac{11}{23}$

99) _____

A) $\frac{5}{11}$

B) $\frac{1}{23}$

C) $\frac{11}{5}$

D) $\frac{11}{23}$

Answer: D

Find the absolute value of the number.

100) $|-15|$

100) _____

A) -15

B) 15

C) 30

D) 0

Answer: B

Write the phrase as an algebraic expression. Let x represent the unknown number.

101) Five times a number decreased by 31

101) _____

A) 5x + 31

B) 5x - 31

C) 31x - 5

D) 31 - 5x

Answer: B

Write the sentence as a mathematical statement.

102) Forty-eight is not equal to negative forty-eight.

102) _____

A) 48 ≥ -48

B) 48 ≤ -48

C) 48 ≠ -48

D) 48 = -48

Answer: C

15

Add or subtract as indicated. Write the answer in lowest terms.

103) $\frac{11}{12} - \frac{7}{12}$

  A) $\frac{4}{24}$ B) $\frac{4}{12}$ C) $\frac{1}{3}$ D) $\frac{4}{0}$

  Answer: C

103) _____

104) $\frac{11}{5} - 1$

  A) $\frac{6}{5}$ B) $\frac{54}{5}$ C) 2   D) 10

  Answer: A

104) _____

Simplify the expression.

105) $15 + 26 \cdot 17$

  A) 407   B) 697   C) 457   D) 58

  Answer: C

105) _____

Insert <, >, or = to make the statement true.

106) $|-9|$ ____ 0

  A) <   B) =   C) >

  Answer: C

106) _____

Simplify the expression.

107) $7[4 + 2(8 + 6)]$
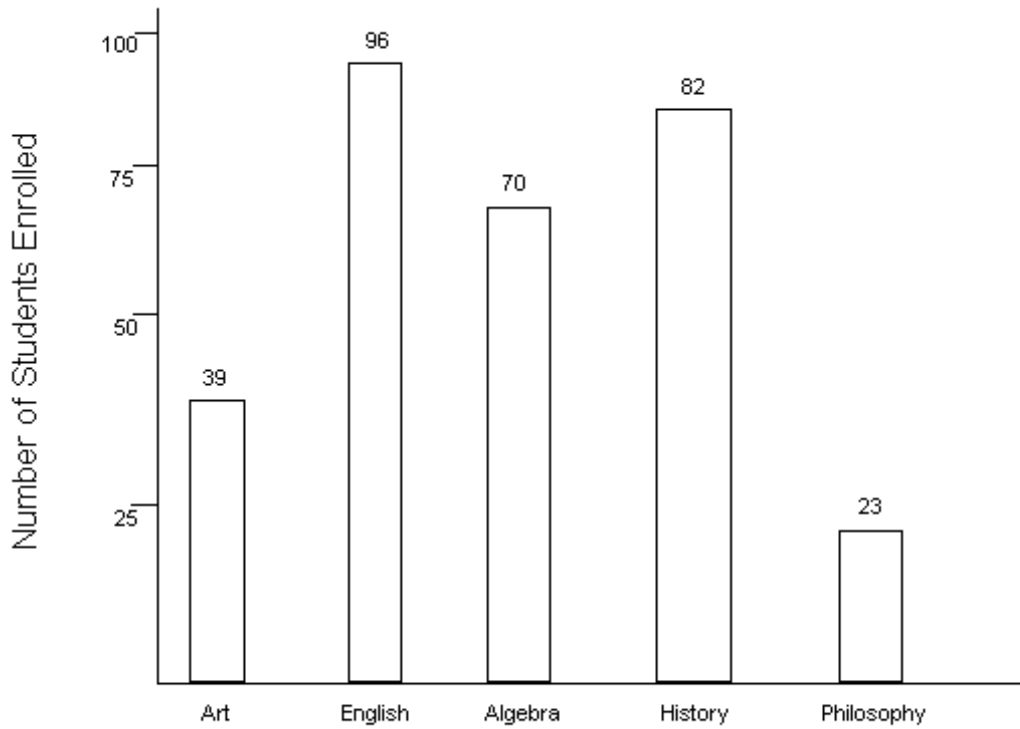
  A) 224   B) 584   C) 56   D) 588

  Answer: A

107) _____

The graph below shows the number of students enrolled in various courses at State University in spring 2000. Each bar represents a different course, and the height of the bar represents the number of students enrolled. Use the graph to answer the question.

108) Write an inequality statement using < or > comparing the number of students enrolled in Art and Philosophy.

    A) 39 ≤ 23   B) 39 > 23   C) 39 < 23   D) 39 ≥ 23

108) _____

Answer: B

Tell whether the statement is true or false.

109) Every irrational number is an integer.

    A) True   B) False

109) _____

Answer: B

Evaluate the expression when x = 2, y = 1, and z = 4.

110) $3z^2$

    A) 48   B) 18   C) 24   D) 19

110) _____

Answer: A

Write the sentence as a mathematical statement.

111) Nine is greater than or equal to three.

    A) 9 ≤ 3   B) 9 = 3   C) 9 > 3   D) 9 ≥ 3

111) _____

Answer: D

Decide whether the given number is a solution of the given equation.

112) Is 6 a solution of 8x - 3 = 75 - 5x?

    A) yes   B) no

112) _____

Answer: A

Use an integer to represent the value in the statement.

113) 28-pound loss

113) _____

    A) 28   B) -28

Answer: B

Multiply or divide as indicated. Write the answer in lowest terms.

114) $\frac{7}{4} \cdot \frac{19}{9}$

114) _____

    A) $\frac{133}{36}$ B) 2   C) $\frac{63}{76}$ D) $\frac{16}{23}$

Answer: A

Evaluate.

115) 7^5

115) _____

    A) 35   B) 117,649   C) 78,125   D) 16,807

Answer: D

Solve. Simplify the answer.

116) Jerry caught a fish that weighed $14\frac{1}{7}$ pounds. Pat caught a fish that weighed $7\frac{4}{7}$ pounds. How much more did Jerry's fish weigh than Pat's fish?

116) _____

    A) $20\frac{4}{7}$ lb   B) $6\frac{3}{7}$ lb   C) $6\frac{4}{7}$ lb   D) $21\frac{4}{7}$ lb

Answer: C

117) June wants to work for $11\frac{1}{4}$ hours at her part-time job this week. She has already worked $5\frac{1}{2}$ hours. How many more hours does she need to work?

117) _____

    A) $4\frac{3}{4}$ hr   B) $5\frac{3}{4}$ hr   C) 5 hr   D) $6\frac{3}{4}$ hr

Answer: B

Write the fraction in lowest terms.

118) $\frac{3}{6}$

118) _____

    A) $\frac{3}{6}$ B) $\frac{1}{2}$ C) $\frac{6}{12}$ D) 2

Answer: B

Simplify the expression.

119) $7 \cdot 7 - 5$

119) _____

    A) 245   B) 44   C) 14   D) 54

Answer: B

Write the fraction as an equivalent fraction with the given denominator.

120) $\frac{6}{5}$ with a denominator of 15

    A) $\frac{30}{15}$ B) $\frac{6}{15}$ C) $\frac{3}{15}$ D) $\frac{18}{15}$

    Answer: D

120) _____

Answer the question according to what the textbook states.

121) Which of these is listed as one of several steps in preparing for an exam?

    A) Review your class notes, and skip reviewing previous homework assignments.
    B) Skip the concepts and definitions in the Chapter Highlights at the end of the chapter.
    C) Leave for the exam as late as possible to increase your amount of study time.
    D) Practice working out exercises by working the Chapter Review.

    Answer: D

121) _____

Insert <, >, or = to make the statement true.

122) $|-50|$ ____ -500

    A) <   B) =   C) >

    Answer: C

122) _____

Write the sentence as a mathematical statement.

123) Forty-six is less than or equal to forty-six.

    A) 46 = 46   B) 46 < 46   C) 46 ≥ 46   D) 46 ≤ 46

    Answer: D

123) _____

Is the following statement true or false?

124) $24 \le 14$

    A) True   B) False

    Answer: B

124) _____

Simplify the expression.

125) $\frac{40(18 - 15) - 6}{3^2 - 3}$

    A) 21   B) 38   C) 19   D) 20

    Answer: C

125) _____

126) $\frac{16 + |18 - 4|}{20 - 5}$

    A) $\frac{6}{5}$ B) 2   C) $\frac{38}{15}$ D) 45

    Answer: B

126) _____

Decide whether the given number is a solution of the given equation.

127) Is 6 a solution of 7 = 1 + x?

    A) yes   B) no

    Answer: A

127) _____

Insert <, >, or = to make the statement true.

128) 0 ___ 3   128) _____

    A) >   B) <   C) =

Answer: B

Decide whether the given number is a solution of the given equation.

129) Is 2 a solution of $9x + 9 = 29$?   129) _____

    A) yes   B) no

Answer: B

Use an integer to represent the value in the statement.

130) losing 41 cents   130) _____

    A) -41   B) 41

Answer: A

Decide whether the given number is a solution of the given equation.

131) Is 8 a solution of $x + 12 = 20x$?   131) _____

    A) yes   B) no

Answer: B

Insert <, >, or = to make the statement true.

132) -6.09 ___ -6.1   132) _____

    A) <   B) =   C) >

Answer: C

Solve. Simplify the answer.

133) The circle graph shows the fraction of books read by grades one through five. What fraction of   133) _____
books was NOT read by the fifth and third grades?
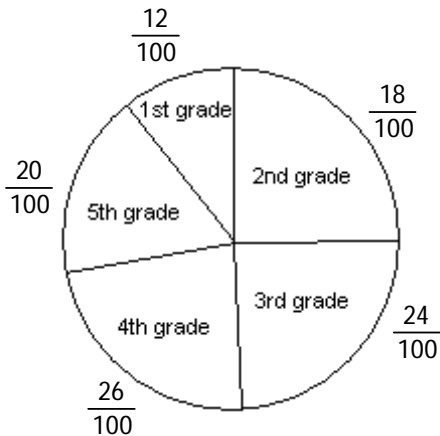
    A) $\frac{14}{25}$ B) $\frac{11}{25}$ C) $\frac{19}{25}$ D) $\frac{4}{5}$

Answer: A

Evaluate the expression for the given replacement values.

134) $\frac{14x - 4y}{2}$ $x = 9, y = 3$ 134) _____

    A) 61   B) 3   C) 57   D) 69

Answer: C

Answer the question according to what the textbook states.

135) Which of these is NOT an end-of-chapter component designed to help you understand the concepts of the chapter?

135) _____

    A) Calculator Exercises   B) Vocabulary Checks

    C) Chapter Tests   D) Chapter Highlights

Answer: A

Multiply or divide as indicated. Write the answer in lowest terms.

136) $\frac{1}{7} \cdot \frac{1}{2}$

136) _____

    A) $\frac{1}{14}$ B) $\frac{2}{9}$ C) $\frac{7}{2}$ D) 14

Answer: A

Write the number as a product of primes.

137) 30

137) _____

    A) $3 \cdot 3 \cdot 2$ B) $2 \cdot 3 \cdot 5$ C) $2 \cdot 2 \cdot 5$ D) $6 \cdot 5$

Answer: B

Simplify the expression.

138) $26 + (10 \cdot 22) - 29$

138) _____

    A) 763   B) 217   C) -252   D) 29

Answer: B

Is the following statement true or false?

139) $8 + 5 \le 4(8)$

139) _____

    A) True   B) False

Answer: A

Insert <, >, or = to make the statement true.

140) $-8 \underline{\hspace{1cm}} -2$

140) _____

    A) =   B) <   C) >

Answer: B

Multiply or divide as indicated. Write the answer in lowest terms.

141) $\frac{4}{6} \div \frac{1}{7}$

141) _____

    A) $\frac{14}{3}$ B) $\frac{5}{13}$ C) $\frac{2}{21}$ D) $\frac{11}{6}$

Answer: A

Evaluate.

142) 9^3

142) _____

    A) 19,683   B) 27   C) 512   D) 729

Answer: D

143) $(0.09)^2$

143) _____

    A) 0.81   B) 0.0081   C) 0.18   D) 0.045

Answer: B

Multiply or divide as indicated. Write the answer in lowest terms.

144) $\frac{4}{19} \div \frac{3}{14}$ 144) _____

    A) $\frac{56}{55}$ B) $\frac{54}{57}$ C) $\frac{55}{57}$ D) $\frac{56}{57}$

    Answer: D

Solve. Simplify the answer.

145) Daniel is $70\frac{1}{2}$ inches tall and his brother Tyler is $67\frac{5}{8}$ inches tall. How much taller is Daniel?   145) _____

    A) $2\frac{7}{8}$ in.   B) $2\frac{2}{3}$ in.   C) $3\frac{1}{8}$ in.   D) $3\frac{7}{8}$ in.

    Answer: A

Write the phrase as an algebraic expression. Let x represent the unknown number.

146) The quotient of a number and 5   146) _____

    A) x - 5   B) 5x   C) $\frac{5}{x}$ D) $\frac{x}{5}$

    Answer: D

Evaluate the expression for the given replacement values.

147) $(x + 2y)^2$ x = 4, y = 3   147) _____

    A) 36   B) 100   C) 20   D) 10

    Answer: B

Write the number as a product of primes.

148) 12   148) _____

    A) 6 · 2   B) 2 · 2 · 3   C) 3 · 3   D) 4 · 3

    Answer: B

Insert <, >, or = to make the statement true.

149) 93 _____ -18   149) _____

    A) <   B) =   C) >

    Answer: C

Write the sentence as an equation or inequality. Use x to represent any unknown number.

150) The quotient of 14 and a number is $\frac{2}{3}$.   150) _____

    A) $\frac{x}{14} = \frac{2}{3}$ B) $\frac{14}{x} = \frac{2}{3}$ C) $14x = \frac{2}{3}$ D) $\frac{2}{3}x = 14$

    Answer: B

Add or subtract as indicated. Write the answer in lowest terms.

151) $\frac{17}{90} + \frac{14}{90}$ 151) _____

    A) $\frac{30}{89}$ B) $\frac{32}{91}$ C) $\frac{30}{90}$ D) $\frac{31}{90}$

    Answer: D

Evaluate.

152) 5^2

    A) 10   B) 32   C) 25   D) 36

152) _____

Answer: C

Add or subtract as indicated. Write the answer in lowest terms.

153) $\frac{3}{8} - \frac{2}{8}$

    A) $\frac{1}{4}$ B) $\frac{3}{16}$ C) $\frac{1}{2}$ D) $\frac{1}{8}$

153) _____

Answer: D

154) $12 - \frac{2}{9}$

    A) $\frac{2}{3}$ B) $\frac{106}{9}$ C) $\frac{110}{9}$ D) $\frac{10}{9}$

154) _____

Answer: B

Write the number as a product of primes.

155) 8

    A) 2 · 2 · 2   B) 2 · 4   C) 2 · 2   D) 2 · 2 · 3

155) _____

Answer: A

Multiply or divide as indicated. Write the answer in lowest terms.

156) $\frac{7}{4} \cdot \frac{5}{4}$

    A) $\frac{1}{28}$ B) 28   C) $1\frac{2}{5}$ D) $2\frac{3}{16}$

156) _____

Answer: D

Write the number as a product of primes.

157) 243

    A) 3 · 3 · 7   B) 3 · 3 · 3 · 5   C) 3 · 3 · 3 · 3 · 3   D) 3 · 3 · 3 · 3

157) _____

Answer: C

The graph below shows the number of students enrolled in various courses at State University in spring 2000. Each bar represents a different course, and the height of the bar represents the number of students enrolled. Use the graph to answer the question.
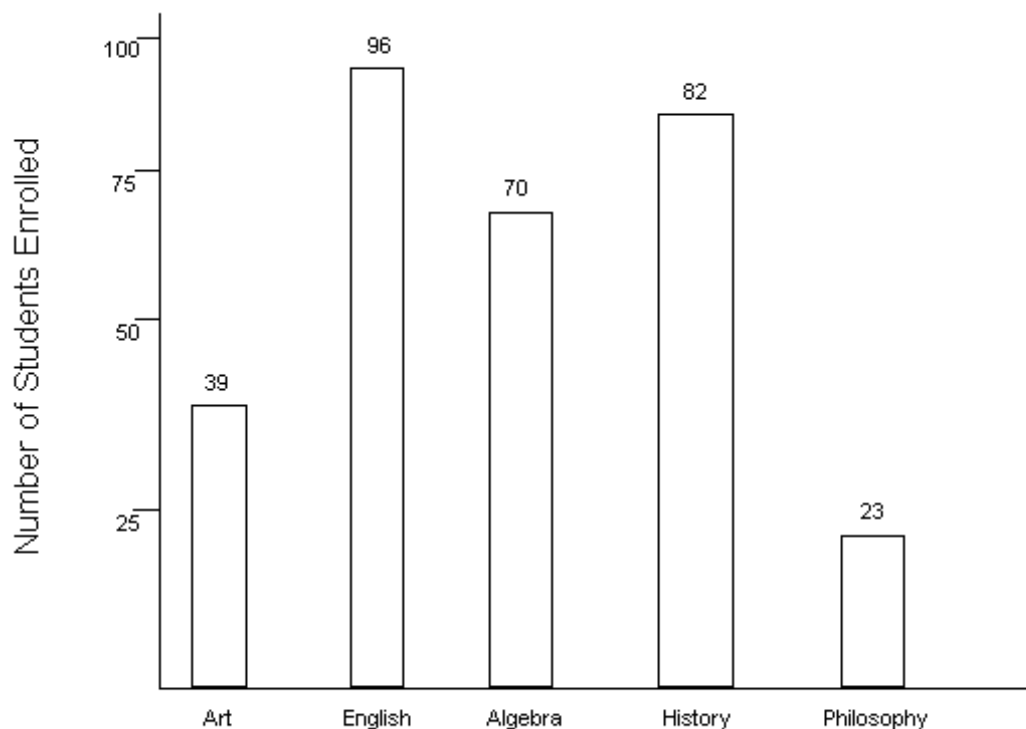
158) Which course had the lowest enrollment?   158) _____
     A) English   B) Art   C) Philosophy   D) Algebra
     Answer: C

Simplify the expression.
     159) $(3 + 8)[6 + (6 + 6)]$ 159) _____
         A) 198   B) 83   C) 1008   D) 432
         Answer: A

Tell whether the statement is true or false.
     160) 0 is a natural number.   160) _____
         A) True   B) False
         Answer: B

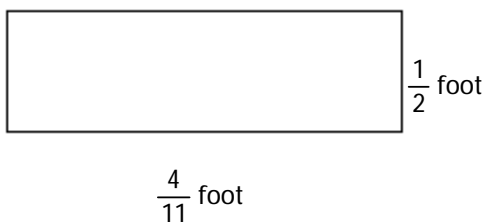Find the area of the figure below. (The area of a rectangle is the product of its length and width. The area of a triangle is $\frac{1}{2}$ the product of its base and height.)

161)

$\frac{1}{2}$ foot

$\frac{4}{11}$ foot

161) _____

A) $\frac{5}{13}$ sq ft

B) $\frac{4}{22}$ sq ft

C) $\frac{2}{11}$ sq ft

D) $\frac{4}{13}$ sq ft

Answer: C

Solve. Simplify the answer.

162) Chris rode her bicycle $11\frac{1}{2}$ miles on Tuesday. On Thursday, she rode $6\frac{4}{9}$ miles. What was her total biking distance for those two days?

162) _____

A) $16\frac{17}{18}$ mi

B) $18\frac{17}{18}$ mi

C) $17\frac{17}{18}$ mi

D) $11\frac{17}{18}$ mi

Answer: C

Add or subtract as indicated. Write the answer in lowest terms.

163) $\frac{5}{8} + \frac{4}{7}$

163) _____

A) $\frac{9}{56}$

B) $\frac{17}{14}$

C) $\frac{3}{5}$

D) $\frac{67}{56}$

Answer: D

164) $\frac{6}{9} - \frac{4}{8}$

164) _____

A) $\frac{1}{6}$

B) $\frac{4}{3}$

C) $\frac{2}{9}$

D) $\frac{1}{36}$

Answer: A

Solve. Simplify the answer.

165) Ian walked $\frac{5}{30}$ of a mile to his biology class, $\frac{5}{30}$ of a mile to his art class, $\frac{6}{30}$ of a mile to his calculus class, and then back to his dormitory. If he walked 1 mile altogether, how far did he walk from his calculus class to his dormitory?

165) _____

A) $\frac{8}{15}$ mi

B) $\frac{7}{15}$ mi

C) $\frac{2}{3}$ mi

D) $\frac{19}{30}$ mi

Answer: B

25

Is the following statement true or false?

166) -1 ≥ 12   166) _____
      A) True   B) False

      Answer: B

Tell whether the statement is true or false.

167) Every rational number is an integer.   167) _____
      A) True   B) False

      Answer: B

168) Some rational numbers are integers.   168) _____
      A) True   B) False

      Answer: A

Solve. Simplify the answer.

169) Erika spent $\frac{3}{4}$ of an hour on her computer visiting the history channel and the discovery channel   169) _____

websites. She spent $\frac{1}{3}$ of an hour at the history channel website. How many hours did she spend at

the discovery channel website?

    A) $\frac{1}{3}$ hr   B) $\frac{1}{6}$ hr   C) $\frac{2}{3}$ hr   D) $\frac{5}{12}$ hr

      Answer: D

Write the phrase as an algebraic expression. Let x represent the unknown number.

170) Two-sevenths times a number   170) _____

    A) $\frac{2}{7}$ + x   B) $\frac{2}{7}$x   C) x - $\frac{2}{7}$ D) $\frac{2}{7}$ - x

      Answer: B

Write the sentence as a mathematical statement.

171) Fourteen is greater than seven.   171) _____
    A) 14 ≥ 7   B) 14 < 7   C) 14 > 7   D) 14 = 7

      Answer: C

Insert <, >, or = to make the statement true.

172) -0.2 ____ -1.0   172) _____
    A) <   B) >   C) =

      Answer: B

Write the sentence as an equation or inequality. Use x to represent any unknown number.

173) The difference of twelve and three is greater than seven.   173) _____
    A) 12 - 3 < 7   B) 3 - 12 < 7   C) 3 - 12 > 7   D) 12 - 3 > 7

      Answer: D

Insert <, >, or = to make the statement true.

174) 6 ____ 6   174) _____
    A) =   B) <   C) >

      Answer: A

Simplify the expression.

175) $\dfrac{1 + 8}{10 + 6}$ 175) _____

A) $-\dfrac{7}{4}$ B) $\dfrac{9}{4}$ C) $\dfrac{9}{16}$ D) $-\dfrac{7}{16}$

Answer: C

Multiply or divide as indicated. Write the answer in lowest terms.

176) $3\dfrac{1}{3} \cdot 1\dfrac{1}{5}$ 176) _____

A) 4   B) 7   C) 5   D) $3\dfrac{2}{15}$

Answer: A

Add or subtract as indicated. Write the answer in lowest terms.

177) $\dfrac{2}{9} + \dfrac{2}{3} - \dfrac{1}{6}$ 177) _____

A) $\dfrac{13}{9}$ B) $\dfrac{13}{18}$ C) $\dfrac{19}{18}$ D) $\dfrac{19}{9}$

Answer: B

Solve the problem.

178) As part of a fund raiser, Maria sold 280 candy bars. Drew sold 167 candy bars. Write an inequality   178) _____
statement using ≤ or ≥ comparing the numbers 280 and 167.

A) $280 \geq 167$ B) $280 \leq 167$

Answer: A

Write the sentence as a mathematical statement.

179) Fifteen is less than or equal to eighteen.   179) _____

A) $15 \neq 18$ B) $15 \geq 18$ C) $15 < 18$ D) $15 \leq 18$

Answer: D

Write the sentence as an equation or inequality. Use x to represent any unknown number.

180) Twice a number is 13.   180) _____

A) $\dfrac{1}{2}x = 13$ B) $x = 26$ C) $x + 2 = 13$ D) $2x = 13$

Answer: D

Simplify the expression.

181) $7^2 - 5 \cdot 5$ 181) _____

A) 220   B) 70   C) 20   D) 24

Answer: D

Tell which set or sets the number belongs to: natural numbers, whole numbers, integers, rational numbers, irrational numbers, and real numbers.

182) 0.1515...   182) _____

A) natural, rational, real   B) real

C) irrational, real   D) rational, real

Answer: D

Write the sentence as a mathematical statement.

183) Thirty-five is greater than or equal to thirty-five.

    A) $35 > 35$ B) $35 \geq 35$ C) $35 \leq 35$ D) $35 = 35$

183) _____

Answer: B

Evaluate.

184) $\left(\dfrac{1}{2}\right)^4$

    A) $\dfrac{1}{16}$ B) 2 C) $\dfrac{1}{6}$ D) $\dfrac{1}{8}$

184) _____

Answer: A

Insert <, >, or = to make the statement true.

185) $|-3|$ ____ $|-19|$

    A) $<$ B) $=$ C) $>$

185) _____

Answer: A

Write the sentence as an equation or inequality. Use x to represent any unknown number.

186) Eight minus three times a number is 40.

    A) $3 - 8x = 40$ B) $3x - 8 = 40$ C) $8x - 3 = 40$ D) $8 - 3x = 40$

186) _____

Answer: D

Insert <, >, or = to make the statement true.

187) 0 ____ $|-13|$

    A) $>$ B) $=$ C) $<$

187) _____

Answer: C

Write the sentence as an equation or inequality. Use x to represent any unknown number.

188) Five is not equal to eight divided by two.

    A) $5 \neq 8$ B) $5 \div 2 \neq 8$ C) $5 = 8 \div 2$ D) $5 \neq 8 \div 2$

188) _____

Answer: D

Write the fraction as an equivalent fraction with the given denominator.

189) $\dfrac{4}{11}$ with a denominator of 22

    A) $\dfrac{2}{22}$ B) $\dfrac{4}{22}$ C) $\dfrac{44}{22}$ D) $\dfrac{8}{22}$

189) _____

Answer: D

Simplify the expression.

190) $[36 - (4 + 6) \div 2] - [1 + 18 \div 3]$

    A) 24 B) 19 C) 31 D) 21

190) _____

Answer: A

191) $(24 + 30) \cdot (28 - 17)$

    A) 4.91 B) 65 C) 594 D) 1495

191) _____

Answer: C

Is the following statement true or false?

192) $13 < -3$

    A) True   B) False

192) _____

Answer: B

Simplify the expression.

193) $6^3 + 3^2$

    A) 24   B) 225   C) 27   D) 222

193) _____

Answer: B

Is the following statement true or false?

194) $-1 \le 1$

    A) True   B) False

194) _____

Answer: A

Add or subtract as indicated. Write the answer in lowest terms.

195) $3\frac{3}{5} + 5\frac{5}{7}$

    A) $5\frac{13}{35}$ B) $9\frac{11}{35}$ C) $2\frac{22}{35}$ D) $1\frac{1}{3}$

195) _____

Answer: B

Is the following statement true or false?

196) $25 > 16$

    A) True   B) False

196) _____

Answer: A

Tell which set or sets the number belongs to: natural numbers, whole numbers, integers, rational numbers, irrational numbers, and real numbers.

197) 3.74

    A) natural, rational, real   B) rational, real

    C) rational   D) real

197) _____

Answer: B

198) $-\sqrt{22}$

    A) whole, real   B) rational, real   C) integer, real   D) irrational, real

198) _____

Answer: D

Tell whether the statement is true or false.

199) Every whole number is a real number.

    A) True   B) False

199) _____

Answer: A

Insert <, >, or = to make the statement true.

200) $\left|\frac{5}{9}\right| \underline{\quad\quad} \left|-\frac{5}{9}\right|$

    A) <   B) =   C) >

200) _____

Answer: B

201) −7 ____ 0   201) _____

    A) <   B) =   C) >

    Answer: A

Evaluate.

202) 9^4 202) _____

    A) 6561   B) 262,144   C) 36   D) 729

    Answer: A

Multiply or divide as indicated. Write the answer in lowest terms.

203) $4\frac{4}{7} \div 8$ 203) _____

    A) $\frac{4}{7}$ B) $\frac{2}{3}$ C) $\frac{3}{7}$ D) $\frac{5}{7}$

    Answer: A

Solve. Simplify the answer.

204) A painter used $5\frac{5}{6}$ gallons of paint to paint the front of a house and another $8\frac{3}{10}$ gallons to paint   204) _____

    the back. How much paint did he use in total?

    A) $13\frac{2}{15}$ gal   B) $13\frac{68}{60}$ gal   C) $13\frac{23}{60}$ gal   D) $14\frac{2}{15}$ gal

    Answer: D

Solve the problem.

205) Building A is 51 feet tall. Building B is 96 feet tall. Write an inequality statement using < or >   205) _____
    comparing the numbers 51 and 96.

    A) 51 < 96   B) 51 > 96

    Answer: A

Multiply or divide as indicated. Write the answer in lowest terms.

206) $4\frac{1}{2} \cdot 3\frac{1}{3}$ 206) _____

    A) 14   B) 15   C) 10   D) 12

    Answer: B

Decide whether the given number is a solution of the given equation.

207) Is 12 a solution of x − 1 = 11?   207) _____

    A) yes   B) no

    Answer: A

Evaluate the expression for the given replacement values.

208) $8y + \frac{55}{x}$ x = 5, y = 7   208) _____

    A) 111   B) 11   C) 67   D) 19

    Answer: C

Insert <, >, or = to make the statement true.

209) $|-7|$ _____ $\dfrac{-14}{2}$
                                                                      209) _____

    A) <   B) =   C) >

Answer: C

210) 9.2 _____ 9.2   210) _____

    A) =   B) >   C) <

Answer: A

Tell which set or sets the number belongs to: natural numbers, whole numbers, integers, rational numbers, irrational numbers, and real numbers.

211) 0   211) _____

    A) whole, integer, rational, real   B) whole, real
    C) rational, real   D) integer, real

Answer: A

Evaluate the expression when x = 2, y = 1, and z = 4.

212) 5x + 6   212) _____

    A) 16   B) 40   C) 17   D) 60

Answer: A

Is the following statement true or false?

213) –79 < 0   213) _____

    A) True   B) False

Answer: A

Use an integer to represent the value in the statement.

214) a deposit of $449.18 in your checkbook   214) _____

    A) 449.18   B) –449.18

Answer: A

Add or subtract as indicated. Write the answer in lowest terms.

215) $6\dfrac{2}{9} - 2\dfrac{5}{6}$ 215) _____

    A) $2\dfrac{1}{6}$ B) $3\dfrac{5}{18}$ C) $2\dfrac{7}{18}$ D) $3\dfrac{7}{18}$

Answer: D

Evaluate the expression for the given replacement values.

216) $\dfrac{x^2 + z}{y^2 - 3z}$ x = 4, y = 1, z = 12   216) _____

    A) $\dfrac{28}{37}$ B) $-\dfrac{4}{5}$ C) $-\dfrac{28}{11}$ D) $-\dfrac{192}{35}$

Answer: B

Tell whether the statement is true or false.

217) Every integer is an irrational number.   217) _____
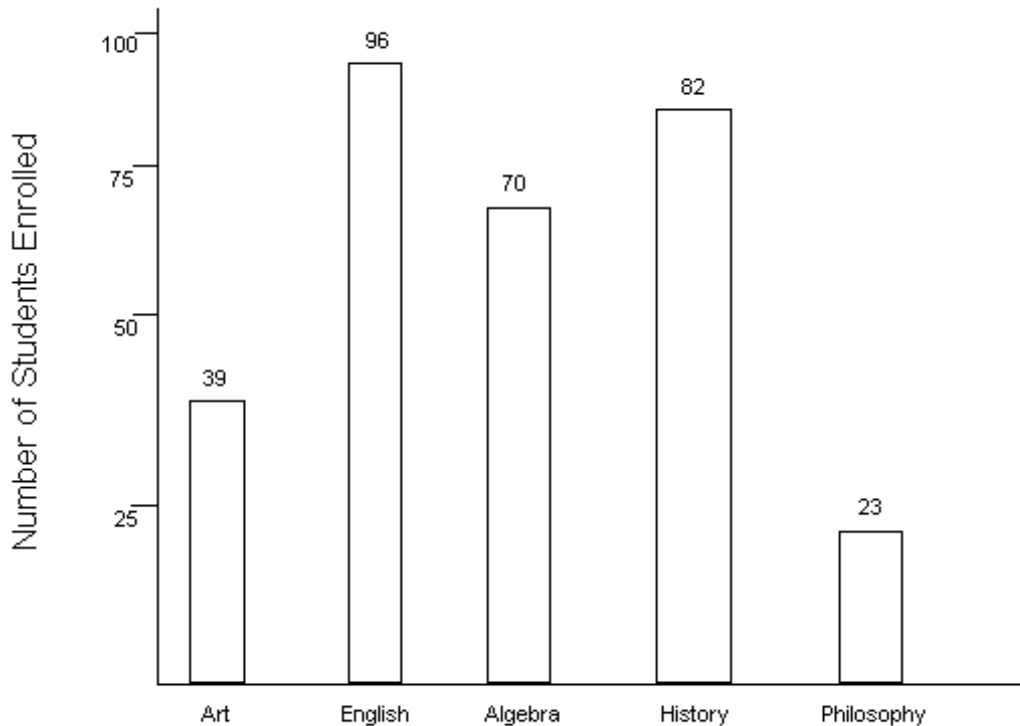
     A) True   B) False

Answer: B

The graph below shows the number of students enrolled in various courses at State University in spring 2000. Each bar represents a different course, and the height of the bar represents the number of students enrolled. Use the graph to answer the question.

218) For which courses was enrollment less than 75?   218) _____

     A) Art, Algebra, History, and Philosophy   B) Art, Algebra, and Philosophy

     C) Art and Philosophy   D) Algebra and Philosophy

Answer: B

Solve the problem.

219) At Relax Resort, the Beginner's Trail is 8 kilometers long. The Advanced Trail is 15 kilometers long.   219) _____
Write an inequality statement using ≤ or ≥ comparing the numbers 8 and 15.

     A) $8 \leq 15$ B) $8 \geq 15$

Answer: A

Tell which set or sets the number belongs to: natural numbers, whole numbers, integers, rational numbers, irrational numbers, and real numbers.

220) $\sqrt{17}$ 220) _____

     A) integer, real   B) whole, real   C) rational, real   D) irrational, real

Answer: D

Evaluate the expression when x = 2, y = 1, and z = 4.

221) $|7z - 2y|$

A) 26   B) -26   C) 30   D) 24

221) _____

Answer: A

Add or subtract as indicated. Write the answer in lowest terms.

222) $\frac{5}{27} - \frac{4}{45}$

A) $\frac{13}{1215}$ B) $\frac{7}{45}$ C) $\frac{13}{135}$ D) $\frac{1}{135}$

222) _____

Answer: C

Use an integer to represent the value in the statement.

223) a decrease of 114 feet in elevation

A) -114   B) 114

223) _____

Answer: A

224) $3726 out of debt

A) 3726   B) -3726

224) _____

Answer: A

Multiply or divide as indicated. Write the answer in lowest terms.

225) $4\frac{1}{8} \div 2\frac{2}{3}$

A) $1\frac{36}{64}$ B) $1\frac{35}{63}$ C) $2\frac{35}{64}$ D) $1\frac{35}{64}$

225) _____

Answer: D

Evaluate the expression for the given replacement values.

226) $\frac{5x - 6y}{x + 4}$ x = 10, y = 4

A) $\frac{20}{7}$ B) $\frac{13}{7}$ C) $\frac{13}{4}$ D) 5

226) _____

Answer: B

Tell which set or sets the number belongs to: natural numbers, whole numbers, integers, rational numbers, irrational numbers, and real numbers.
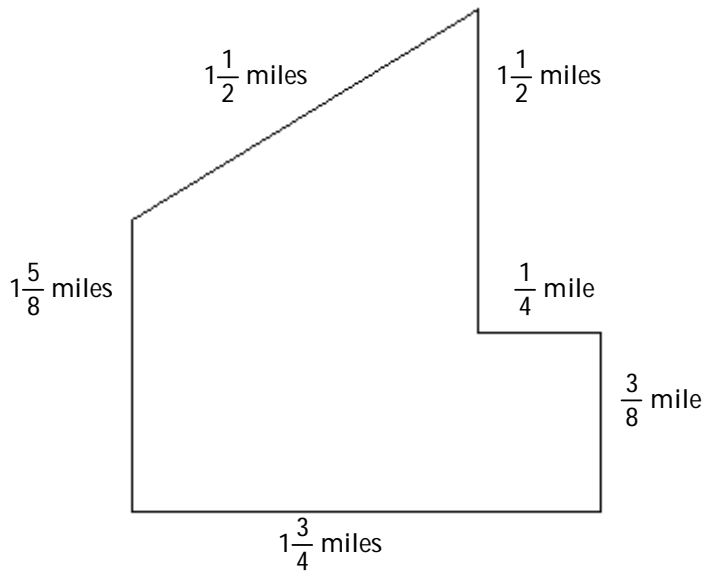
227) $\frac{1}{13}$

A) rational, real   B) real   C) irrational, real   D) whole, real

227) _____

Answer: A

The perimeter of a plane figure is the total distance around the figure. Find the perimeter of the figure.

228) 228) _____

$1\frac{1}{2}$ miles $1\frac{1}{2}$ miles

$1\frac{5}{8}$ miles $\frac{1}{4}$ mile

$\frac{3}{8}$ mile

$1\frac{3}{4}$ miles

  A) $5\frac{3}{4}$ miles   B) 7 miles   C) $5\frac{1}{2}$ miles   D) $3\frac{3}{4}$ miles

Answer: B

Insert <, >, or = to make the statement true.

229) $\frac{15}{3}$ ____ $\frac{20}{4}$ 229) _____

  A) <   B) >   C) =

Answer: C

230) 0 ____ -7 230) _____

  A) =   B) <   C) >

Answer: C

Multiply or divide as indicated. Write the answer in lowest terms.

231) $\frac{5}{6} \div \frac{7}{3}$ 231) _____

  A) $\frac{5}{14}$ B) $\frac{18}{35}$ C) $2\frac{4}{5}$ D) $1\frac{17}{18}$

Answer: A

232) $1\frac{4}{5} \div 5\frac{1}{10}$ 232) _____

  A) $1\frac{2}{3}$ B) $\frac{6}{17}$ C) $8\frac{1}{5}$ D) $9\frac{9}{50}$

Answer: B

1) C
2) B
3) B
4) A
5) B
6) B
7) D
8) B
9) B
10) C
11) B
12) C
13) C
14) C
15) A
16) A
17) A
18) B
19) B
20) A
21) B
22) D
23) A
24) B
25) A
26) A
27) C
28) B
29) C
30) C
31) D
32) B
33) C
34) D
35) C
36) B
37) B
38) B
39) B
40) D
41) C
42) B
43) B
44) B
45) C
46) B
47) D
48) C
49) B
50) A

51) A
52) D
53) D
54) A
55) B
56) C
57) A
58) C
59) D
60) B
61) B
62) A
63) A
64) B
65) C
66) C
67) C
68) C
69) C
70) C
71) B
72) A
73) C
74) D
75) B
76) D
77) A
78) C
79) B
80) A
81) D
82) D
83) A
84) A
85) A
86) D
87) C
88) B
89) C
90) B
91) C
92) A
93) A
94) C
95) D
96) C
97) B
98) A
99) D
100) B

101) B
102) C
103) C
104) A
105) C
106) C
107) A
108) B
109) B
110) A
111) D
112) A
113) B
114) A
115) D
116) C
117) B
118) B
119) B
120) D
121) D
122) C
123) D
124) B
125) C
126) B
127) A
128) B
129) B
130) A
131) B
132) C
133) A
134) C
135) A
136) A
137) B
138) B
139) A
140) B
141) A
142) D
143) B
144) D
145) A
146) D
147) B
148) B
149) C
150) B

151) D
152) C
153) D
154) B
155) A
156) D
157) C
158) C
159) A
160) B
161) C
162) C
163) D
164) A
165) B
166) B
167) B
168) A
169) D
170) B
171) C
172) B
173) D
174) A
175) C
176) A
177) B
178) A
179) D
180) D
181) D
182) D
183) B
184) A
185) A
186) D
187) C
188) D
189) D
190) A
191) C
192) B
193) B
194) A
195) B
196) A
197) B
198) D
199) A
200) B

201) A
202) A
203) A
204) D
205) A
206) B
207) A
208) C
209) C
210) A
211) A
212) A
213) A
214) A
215) D
216) B
217) B
218) B
219) A
220) D
221) A
222) C
223) A
224) A
225) D
226) B
227) A
228) B
229) C
230) C
231) A
232) B