

MAT0022 - Chapter 5
Math Connections
Valencia College

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

5.1

Write the decimal number in standard form.

- 1) Eight and seventeen hundredths 1) _____

- 2) Fourteen and seven hundred forty-seven thousandths 2) _____

- 3) Three hundred ninety-one thousandths 3) _____

- 4) Six and five hundred sixteen ten-thousandths 4) _____

- 5) One hundred and two tenths 5) _____

- 6) Negative one and two hundred thirty-five thousandths 6) _____

Write the decimal as a fraction or mixed number in lowest terms.

- 7) 0.66 7) _____

- 8) 0.288 8) _____

- 9) 0.5 9) _____

- 10) 11.6 10) _____

- 11) 57.325 11) _____

- 12) 37.13 12) _____

Insert $<$, $>$, or $=$ between the pair of numbers to form a true statement.

- 13) 0.92 _____ 0.98 13) _____

- 14) -0.45 _____ -0.43 14) _____

- 15) 0.566 _____ 0.56600 15) _____

- 16) 187.090 _____ 187.009 16) _____

Round the decimal to the given place value.

- 17) 55.9, nearest one 17) _____

- 18) 1.212, nearest hundredth 18) _____
- 19) 38.5, nearest ten 19) _____
- 20) 13.5121, nearest hundredth 20) _____
- 21) 8.67, nearest tenth 21) _____
- 22) 8.365, nearest tenth 22) _____
- 23) 9.0444, nearest thousandth 23) _____
- 24) 3.08631, nearest thousandth 24) _____
- 25) -16.85, nearest hundredth 25) _____
- 26) -0.0303, nearest thousandth 26) _____

Round the money amount to the nearest cent or dollar as indicated.

- 27) \$0.2111, nearest cent 27) _____
- 28) \$11.58, nearest dollar 28) _____
- 29) \$354.50, nearest dollar 29) _____
- 30) \$0.08882, nearest cent 30) _____

Round

- 31) Attendance at a football game was reported to be 11,254. Round this number to the nearest thousand. 31) _____
- 32) A swimmer swims the 200m freestyle in 2.26526 minutes. Round her time to the nearest hundredth. 32) _____

5.2

Perform the indicated operation.

- 33) 33) _____

$$\begin{array}{r} 6.26 \\ 1.47 \\ + 26.92 \\ \hline \end{array}$$

$$\begin{array}{r}
 34) \\
 346.223 \\
 28.951 \\
 + \underline{1.888}
 \end{array}$$

34) _____

35) $42.29 + 62.88 + 18.135$

35) _____

36) $267.9 + 0.46 + 75.15 + 24.3$

36) _____

37) $(-1.6) + (1.3)$

37) _____

38) $0.21 + (-7.626)$

38) _____

$$\begin{array}{r}
 39) \\
 5.2 \\
 - \underline{1.865}
 \end{array}$$

39) _____

40) $15.2 - 12.55$

40) _____

41) $-8.5 - 3.3$

41) _____

42) $600 - 97.627$

42) _____

Estimate the sum or difference by rounding.

$$\begin{array}{r}
 43) \\
 203.23 \\
 6.98 \\
 + \underline{52.46}
 \end{array}$$

43) _____

$$\begin{array}{r}
 44) \\
 108.62 \\
 8.25 \\
 + \underline{9.009}
 \end{array}$$

44) _____

Evaluate the expression for the given replacement values.

45) $x + z$ for $x = 3.1, z = 0.54$

45) _____

46) $x - z$ for $x = 8.1, z = 0.75$

46) _____

Determine whether the given value is a solution to the given equation.

47) Is 4 a solution to $x + 5.1 = 9.6$?

47) _____

48) Is 4.5 a solution to $x + 7.1 = 11.6$?

48) _____

49) Is 12 a solution to $26.3 - y = 14.3$?

49) _____

50) Is 4.6 a solution to $3.7 + x = 11.9 - x$?

50) _____

Simplify by combining like terms.

51) $19.1x - 8.2 - 7.7x + 20.4$

51) _____

52) $24.2x + 5.8 - 9.6x - 11.6$

52) _____

53) $9.8 - 7.9x - 13.5x + 5.2$

53) _____

Solve.

54) Brittany bought a video for \$38.57. If she paid with two \$20 bills, what was her change?

54) _____

55) Last year, Sam's average electricity bill was \$92.21. In October, his electricity bill was \$147.88. How much more than last year's average was the October bill?

55) _____

56) One week in March in the town of Cedartown, it rained 1.87 inches on Tuesday, 0.90 inches on Thursday, and 2.44 inches on Friday. It did not rain the other four days. What was the total rainfall for the week?

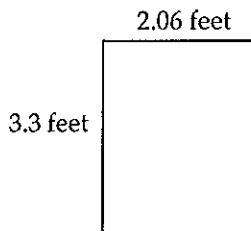
56) _____

57) In a practice run, a race car driver's speed is clocked at 142.033 mph at the end of her first lap, and at 174.947 mph at the end of the next lap. How much faster was she driving at the end of the second lap?

57) _____

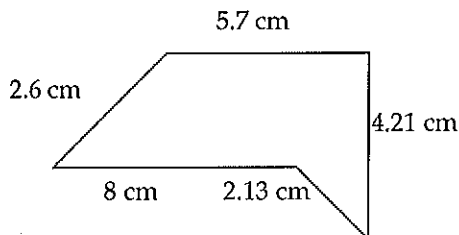
58) Find the perimeter of the rectangle.

58) _____



59) Find the perimeter of the figure below.

59) _____



Multiply.

$$\begin{array}{r} 60) \\ 0.357 \\ \times 6.8 \\ \hline \end{array}$$

60) _____

61) (11.61)(0.0059)

61) _____

62) (0.07)(0.08)

62) _____

63) (-8.3)(10.3)

63) _____

64) (16.7)(9.13)

64) _____

65) (2.29)(6.42)

65) _____

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

$$\begin{array}{r} 66) \\ 0.888 \\ \times 7.2 \\ \hline \end{array}$$

66) _____

A) 6.3936

B) 8.088

C) 8

D) 6

67) (12.56)(0.0015)

67) _____

A) 0.02884

B) 0.11884

C) 0.00884

D) 0.01884

68) (0.06)(0.09)

68) _____

A) 0.000054

B) 0.054

C) 0.0054

D) 0.54

69) (1.7)(12.5)

69) _____

A) 0.2125

B) 2.125

C) 212.5

D) 21.25

70) (8.5)(-8.35)

70) _____

A) -70.975

B) -7.0975

C) -709.75

D) -0.70975

71) (-3.20)(0.68)

71) _____

A) -21.76

B) -0.2176

C) -2.176

D) -0.02176

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

72) 7.9×0.01

72) _____

73) (8.2)(1000)

73) _____

74) (-9.793)(1000)

74) _____

75) $(-9.719)(-0.1)$

75) _____

Evaluate the expression for the given replacement values.

76) xy for $x = 8, y = -3.5$

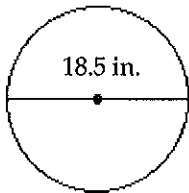
76) _____

77) $-4y$ for $y = -3.8$

77) _____

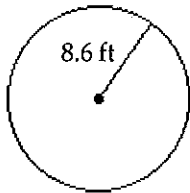
Find the circumference of the circle. Then use the approximation 3.14 for π and approximate the circumference.

78)



78) _____

79)



79) _____

Solve.

80) The nutrition chart on a bag of flavored cheese puffs says that each serving contains 0.35 grams of sodium. The chart also says that there are 4 servings in the bag. How many grams of sodium are in the entire bag of cheese puffs?

80) _____

81) Gary earns \$9.13 per hour at his job. He worked 28 hours last week. Calculate Gary's pay before taxes.

81) _____

82) A farmer sells 10,000 bushels of cotton for \$3.55 a bushel. How much did the farmer receive?

82) _____

Divide.

83) $-0.5 \div (-0.8)$

83) _____

84) $-4.2 \div 0.06$

84) _____

85) $2.18 \div 0.5$

85) _____

86) $6 \overline{)3.6}$

86) _____

87) $4.1 \overline{)34.44}$

87) _____

88) Divide 138 by -0.0023

88) _____

89) $6 \overline{)85.2}$

89) _____

Divide, and round the quotient as indicated.

90) Divide 7.13 by 0.013 and round the quotient to the nearest hundredth.

90) _____

91) Divide 4.249 by 2.2 and round the quotient to the nearest hundredth.

91) _____

92) Divide 1583.9 by 0.009 and round the quotient to the nearest thousandth.

92) _____

Divide.

93) $11.104 \div 100$

93) _____

94) $-8.68 \div (-100)$

94) _____

95) $0.46 \div (-10)$

95) _____

96) $\frac{21.93}{10}$

96) _____

97) $\frac{0.61}{1000}$

97) _____

Evaluate the expression for the given replacement values.

98) $x \div y$ for $x = 15.6$, $y = 3.9$

98) _____

99) $y \div 8$ for $y = 0.384$

99) _____

Determine whether the given value is a solution to the given equation.

100) $\frac{x}{5} = 6.23$; $x = 31.15$

100) _____

101) $\frac{x}{6.8} = 0.49$; $x = 3.332$

101) _____

Solve.

102) Adam buys \$10.65 worth of gasoline for his car. If the gas station charges \$1.589 per gallon, how many gallons did he get? (Round to the nearest tenth.)

102) _____

103) There are approximately 3.28 feet in 1 meter. How many meters are there in 40 feet? (Round to the nearest hundredth.)

103) _____

104) Madison, Ben, and Todd enter a 41.4-mile bicycle team relay race. They complete the course in 1.91 hours. What was their average speed on the course? (Round to the nearest tenth.)

104) _____

- 105) In one year, a baseball player got 181 hits in 498 times at bat. What was his batting average? Give decimal notation to the nearest thousandth. 105) _____
- 106) The water in a tank weighs 534.44 lb. One cubic foot of water weighs 62.5 lb. How many cubic feet of water are in the tank? (Round to the nearest hundredth.) 106) _____

5.5

Write the fraction as a decimal. If necessary, use repeating decimal notation.

- 107) $\frac{3}{16}$ 107) _____
- 108) $-\frac{17}{20}$ 108) _____
- 109) $\frac{47}{20}$ 109) _____
- 110) $\frac{1}{11}$ 110) _____
- 111) $\frac{6}{5}$ 111) _____
- 112) $-\frac{5}{9}$ 112) _____
- 113) $\frac{86}{125}$ 113) _____
- 114) $\frac{129}{375}$ 114) _____

Write the fraction as a decimal. If necessary, use repeating decimal notation.

- 115) A survey taken in an elementary school revealed that $\frac{20}{103}$ of the first-graders did not eat or drink a milk product at least one time every day of the week. Write this amount as a decimal, rounding to the nearest hundredth. 115) _____
- 116) An organization surveys its members and finds that $\frac{9}{22}$ of them have children. Write this fraction as a decimal. Round to the nearest thousandth, if necessary. 116) _____
- 117) Prof. Al-Badul calculated that $\frac{1}{5}$ of her students passed their college algebra exam. Write this fraction as a decimal, rounding to the nearest thousandth if necessary. 117) _____

118) Millie has a new sewing machine that will automatically set the seam allowance guide, but it must be entered as a decimal. Millie's pattern only gives the seam allowances as fractions. If the pattern gives the seam allowance as $\frac{1}{4}$ -inch, what number should Millie enter into the sewing machine? Round to the nearest thousandth, if necessary. 118) _____

Insert <, >, or = between the pair of numbers to form a true statement.

119) 0.234 _____ 0.254 119) _____

120) 0.746 _____ 0.744 120) _____

121) $\frac{83}{14}$ _____ 5.929 121) _____

122) $\frac{82}{11}$ _____ 7.453 122) _____

123) $\frac{17}{4}$ _____ 4.25 123) _____

124) 0.889 _____ $\frac{65}{73}$ 124) _____

125) 0.754 _____ 0.759 125) _____

126) 0.965 _____ 0.961 126) _____

127) $\frac{17}{4}$ _____ 4.251 127) _____

128) $\frac{43}{13}$ _____ 3.306 128) _____

129) $\frac{71}{8}$ _____ 8.875 129) _____

130) 0.286 _____ $\frac{11}{36}$ 130) _____

Arrange the list of numbers in order from smallest to largest.

131) 0.063, 0.036, 0.033, 0.066 131) _____

132) $\frac{4}{5}, \frac{6}{7}, \frac{5}{6}, 0.95$ 132) _____

133) $4.25, 4\frac{5}{8}, 4.52, 4\frac{4}{9}$

133) _____

Simplify the expression.

134) $\frac{3 + 0.2}{-0.8}$

134) _____

135) $-4.8(2 - 1.8)$

135) _____

136) $(-2.4)^2$

136) _____

137) $(5.2)(100) - (5.2)(10)$

137) _____

138) $-0.8(4.7 - 5.9)$

138) _____

139) $\frac{0.143 - 2.933}{9}$

139) _____

140) $(-6.1)^2 + 3.1 - 2.5$

140) _____

141) $(9.3 + 5.4)(5.8 - 3.4)$

141) _____

142) $\frac{(2.5)^2}{100}$

142) _____

Find the value of the expression. Give the result as a decimal.

143) $\frac{62}{5} - 4(62)$

143) _____

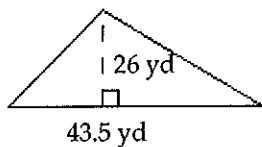
144) $\left(\frac{1}{9}\right)^2 + (5.9)(3.4)$

144) _____

Find the area of the triangle or rectangle. Round to the nearest thousandth, if necessary.

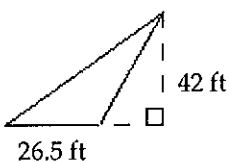
145)

145) _____

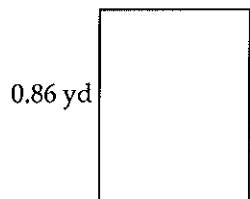


146)

146) _____

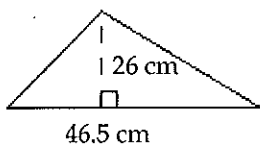


147) $\frac{5}{8}$ yd



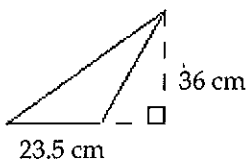
147) _____

148)



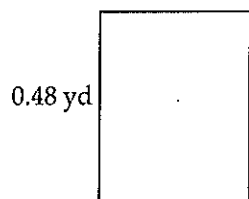
148) _____

149)



149) _____

150) $\frac{3}{8}$ yd



150) _____

Evaluate the expression for the given replacement values.

151) x^2 for $x = 1.3$

151) _____

152) y^2 for $y = -1.5$

152) _____

153) $x - y$ for $x = 3, y = -1.4$

153) _____

154) $5x - z$ for $x = 0.2, z = 3.1$

154) _____

Fill in the blank with one of the choices listed below. Some choices may be used more than once.

vertically
standard form
sum

decimal
mean
denominator

and
median
numerator

right triangle
circumference
mode

155) Like fractional notation, _____ notation is used to denote a part of a whole.

155) _____

156) To write fractions as decimals, divide the _____ by the _____.

156) _____

157) To add or subtract decimals, write the decimals so that the decimal points line up
_____.

157) _____

158) The distance around a circle is called the _____.

158) _____

Answer Key
Testname: 22CH5

- 1) 8.17
- 2) 14.747
- 3) 0.391
- 4) 6.0516
- 5) 100.2
- 6) -1.235
- 7) $\frac{33}{50}$
- 8) $\frac{36}{125}$
- 9) $\frac{1}{2}$
- 10) $11\frac{3}{5}$
- 11) $57\frac{13}{40}$
- 12) $37\frac{13}{100}$
- 13) <
- 14) <
- 15) =
- 16) >
- 17) 56
- 18) 1.21
- 19) 40
- 20) 13.51
- 21) 8.7
- 22) 8.4
- 23) 9.044
- 24) 3.086
- 25) -16.85
- 26) -0.030
- 27) \$0.21
- 28) \$12
- 29) \$355
- 30) \$0.09
- 31) 11,000
- 32) 2.27 minutes
- 33) 34.65
- 34) 377.062
- 35) 123.305
- 36) 367.81
- 37) -0.3
- 38) -7.416
- 39) 3.335
- 40) 2.65
- 41) -11.8
- 42) 502.373

Answer Key
Testname: 22CH5

- 43) 257
- 44) 117
- 45) 3.64
- 46) 7.35
- 47) No
- 48) Yes
- 49) Yes
- 50) No
- 51) $11.4x + 12.2$
- 52) $14.6x - 5.8$
- 53) $-21.4x + 15$
- 54) \$1.43
- 55) \$55.67
- 56) 5.21 in.
- 57) 32.914 mph
- 58) 10.72 ft
- 59) 22.64 cm
- 60) 2.4276
- 61) 0.068499
- 62) 0.0056
- 63) -85.49
- 64) 152.471
- 65) 14.7018
- 66) A
- 67) D
- 68) C
- 69) D
- 70) A
- 71) C
- 72) 0.079
- 73) 8200
- 74) -9793
- 75) 0.9719
- 76) -28
- 77) 15.2
- 78) 58.09 in.
- 79) 54.008 ft
- 80) 1.4 g
- 81) \$255.64
- 82) \$35,500.00
- 83) 0.625
- 84) -70
- 85) 4.36
- 86) 0.6
- 87) 8.4
- 88) -60,000
- 89) 14.2
- 90) 548.46
- 91) 1.93
- 92) 175,988.889

Answer Key
Testname: 22CH5

- 93) 0.11104
- 94) 0.0868
- 95) -0.046
- 96) 2.193
- 97) 0.00061
- 98) 4
- 99) 0.048
- 100) Yes
- 101) Yes
- 102) 6.7 gal
- 103) 12.20 m
- 104) 21.7 mi/hr
- 105) 0.363
- 106) 8.55 cu. ft
- 107) 0.1875
- 108) -0.85
- 109) 2.35
- 110) $0.\overline{09}$
- 111) 1.2
- 112) $-0.\overline{5}$
- 113) 0.688
- 114) 0.344
- 115) 0.19
- 116) 0.409
- 117) 0.2
- 118) 0.25
- 119) <
- 120) >
- 121) <
- 122) >
- 123) =
- 124) <
- 125) <
- 126) >
- 127) <
- 128) >
- 129) =
- 130) <
- 131) 0.033, 0.036, 0.063, 0.066
- 132) $\frac{4}{5}, \frac{5}{6}, \frac{6}{7}, 0.95$
- 133) $4.25, 4\frac{4}{9}, 4.52, 4\frac{5}{8}$
- 134) -4
- 135) -0.96
- 136) 5.76
- 137) 468
- 138) 0.96
- 139) -0.31

Answer Key
Testname: 22CH5

- 140) 37.81
- 141) 35.28
- 142) 0.0625
- 143) -24
- 144) 20.072
- 145) 565.5 sq. yd
- 146) 556.5 sq. ft
- 147) 0.538 sq. yd
- 148) 604.5 sq. cm
- 149) 423 sq. cm
- 150) 0.18 sq. yd
- 151) 1.69
- 152) 2.25
- 153) 4.4
- 154) -2.1
- 155) decimal
- 156) numerator; denomiir
- 157) vertically
- 158) circumference