

Exam

Name _____

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

Choose which of the following descriptions apply to the number (more than one may apply): whole, integer, rational, irrational, real.

1) 71

A) Real, rational, integer

C) Real, rational, whole

B) Real

D) Real, rational, integer, whole

Answer: D

2) -98

A) Real, rational, integer, whole

C) Real, rational, integer

B) Real, rational

D) Real, irrational

Answer: C

3) $\sqrt{5}$

A) Real

C) Real, irrational

B) Real, irrational, integer

D) Real, rational

Answer: C

4) 0

A) Real, rational, integer, whole

C) Real, rational, integer

B) Real, whole

D) Real, rational

Answer: A

5) 6.76

A) Rational

C) Rational, real

B) Whole, rational, real

D) Real, irrational

Answer: C

6) 0.110110...

A) Whole, rational, real

C) Rational, real

B) Real

D) Irrational, real

Answer: C

7) $\frac{7}{16}$

A) Real, rational, integer

C) Real, irrational

B) Real, whole

D) Real, rational

Answer: D

8) $-\sqrt{12}$

A) Real, integer

B) Real, rational

C) Real, whole

D) Real, irrational

Answer: D

9) 0.68140..... [nonrepeating, nonterminating]

- A) Real, irrational, integer
- C) Real, rational

- B) Real, irrational
- D) Real

Answer: B

10) $-\frac{3}{7}$

- A) Real, whole
- C) Real, irrational

- B) Real, rational
- D) Real, rational, integer

Answer: B

Use a real number to represent the situation.

11) They hiked 121 feet below sea level.

- A) -121

- B) +121

Answer: A

12) The thermometer read 38° below zero.

- A) -38

- B) +38

Answer: A

13) The stock experienced a \$324 profit.

- A) +324

- B) -324

Answer: A

14) After a year at Weight Watchers, Simone had lost 12 pounds.

- A) -12

- B) +12

Answer: A

15) The little girl was upset at losing 42 cents.

- A) +42

- B) -42

Answer: B

16) The team gave up 17 points.

- A) +17

- B) -17

Answer: B

17) Roseanne lost \$838.93 on the stock market.

- A) +838.93

- B) -838.93

Answer: B

18) Joey grew $1\frac{3}{4}$ inches in the span of two years.

- A) $-1\frac{3}{4}$

- B) $+1\frac{3}{4}$

Answer: B

Find the additive inverse (opposite).

19) 23

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

B) 23

C) 0

D) -23

Answer: D

20) -22

A) 22

B) $-\frac{1}{22}$

C) 0

D) -22

Answer: A

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

A) $-\frac{2}{9}$

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

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

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

Answer: C

22) $-\frac{3}{8}$

A) $-\frac{8}{3}$

B) $-\frac{3}{8}$

C) $\frac{3}{8}$

D) $\frac{8}{3}$

Answer: C

23) 5.3

A) $-\frac{1}{5.3}$

B) 5.3

C) $\frac{1}{5.3}$

D) -5.3

Answer: D

24) -3.4

A) $-\frac{1}{3.4}$

B) -3.4

C) 3.4

D) $\frac{1}{3.4}$

Answer: C

Find the absolute value.

25) |20|

A) 0

B) 20

C) -20

D) 40

Answer: B

26) |-18|

A) -18

B) 36

C) 0

D) 18

Answer: D

27) |-16.0|

A) 32

B) 16.0

C) -16.0

D) 0

Answer: B

- 28) $|-0.012|$
 A) -0.012 B) 0 C) 0.012 D) 0.024
 Answer: C
- 29) $\left| -\frac{10}{17} \right|$
 A) 0 B) $\frac{20}{17}$ C) $-\frac{10}{17}$ D) $\frac{10}{17}$
 Answer: D
- 30) $\left| \frac{1}{2} \right|$
 A) 1 B) 0 C) $\frac{1}{2}$ D) $-\frac{1}{2}$
 Answer: C
- Add.
- 31) $40 + 24$
 A) 16 B) 65 C) 63 D) 64
 Answer: D
- 32) $-13 + (-16)$
 A) 29 B) 3 C) -3 D) -29
 Answer: D
- 33) $-17.4 + (-15.2)$
 A) 2.2 B) -2.2 C) 32.6 D) -32.6
 Answer: D
- 34) $-\frac{5}{17} + \left(-\frac{4}{17} \right)$
 A) $-\frac{9}{34}$ B) $\frac{1}{17}$ C) $\frac{9}{17}$ D) $-\frac{9}{17}$
 Answer: D
- 35) $-\left(\frac{3}{4} + \frac{3}{20} \right)$
 A) $-\frac{9}{10}$ B) $-\frac{1}{4}$ C) $-\frac{73}{80}$ D) $-\frac{3}{10}$
 Answer: A
- 36) $-5.36 + (-13.4)$
 A) -18.76 B) -18.4 C) -8.04 D) 8.04
 Answer: A
- 37) $2 + (-12)$
 A) 10 B) 14 C) -10 D) -14
 Answer: C

38) $-19 + 10$

A) -29

B) -9

C) 9

D) 29

Answer: B

39) $-2.2 + (-16.3)$

A) -18.5

B) 14.1

C) 18.5

D) -14.1

Answer: A

40) $-76 + 70$

A) 146

B)

C) -146

D) -6

Answer: D

41) $2.247 + (-2.880)$

A)

B) -0.633

C) -5.127

D) -5.027

Answer: B

42) $7.54 + (-1.2)$

A)

B) -8.74

C) -6.34

D)

Answer: A

43) $\frac{3}{4} + (-\frac{5}{8})$

A) $-\frac{11}{8}$

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

C) $-\frac{1}{8}$

D) $\frac{11}{8}$

Answer: B

44) $-\frac{3}{8} + \frac{7}{9}$

A) $\frac{4}{9}$

B) $\frac{29}{72}$

C) $\frac{1}{18}$

D) $\frac{29}{9}$

Answer: B

45) $\frac{6}{7} + \left(-\frac{1}{3}\right)$

A) $\frac{11}{21}$

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

C) $\frac{5}{7}$

D) $\frac{5}{21}$

Answer: A

46) $-9 + (-14) + 19$

A) -42

B) -4

C)

D) 24

Answer: B

47) $12 + (-22) + 4 + (-2)$

A) -8

B) -12

C) 40

D) -16

Answer: A

48) $8.29 + 12.48 + (-7.5)$

A) -3.31

B) 28.27

C) 13.27

D) -11.69

Answer: C

49) $-1.2 + 0.2 + (-0.8) + 0.1$

A) 0.7

B) -1.7

C) 2.5

D) -0.1

Answer: B

Solve the problem.

- 50) A deep-sea diver dives from the surface to 80 feet below the surface. She then dives down 16 more feet. Find the diver's depth.

A) 62 feet below the surface

B) 99 feet below the surface

C) 96 feet below the surface

D) 64 feet below the surface

Answer: C

- 51) Lauren scored 13 points in her basketball game on Monday, 11 on Wednesday, 14 on Friday, and 19 on Saturday. Find her total points scored for the week.

A) 57 points

B) 56 points

C) 58 points

D) 38 points

Answer: A

- 52) The Neighborhood Lemonade Stand, Inc. reported net incomes of -\$250, -\$427, and -\$117 for the past three years. What was its total net income for these three years?

A) -\$794

B) -\$677

C) -\$544

D) \$794

Answer: A

- 53) On part of a scenic tour of underground caves, Dave and Neil started at an elevation of 41 feet below sea level. They then rose 22 feet. Represent their distance below sea level as a signed integer.

A) 63 feet

B) -19 feet

C) -63 feet

D) 19 feet

Answer: B

- 54) At the start of a chemistry experiment, Sarah measured the temperature of a liquid to be -16°C . At the end of the experiment, it had risen 33°C . What was the liquid's temperature at the end of the experiment?

A) 49°C

B) -49°C

C) -17°C

D) 17°C

Answer: D

- 55) In a card game, it is possible to have a negative score. If Ellie's score is 22, what is her new score if she loses 27 points?

A) 49 points

B) -49 points

C) 5 points

D) -5 points

Answer: D

- 56) A deep-sea diver dives from the surface to 197 meters below the surface and then swims up 7 meters, down 17 meters, down another 28 meters, and then up 25 meters. Find the diver's depth after these movements.

A) 210 meters below the surface

B) 224 meters below the surface

C) 120 meters below the surface

D) 154 meters below the surface

Answer: A

- 57) Jared borrowed \$223 from his friend Linda. He paid her back \$25, but then had to borrow another \$78. How much does he still owe her?

A) \$170

B) \$276

C) \$326

D) \$120

Answer: B

58) The population of a particular species of insect was 10,000 in 1960. In 1980, there were 600 fewer, and this year, there are 3800 fewer. What is the current population?

A) 6800 insects

B) 14,400 insects

C) 13,200 insects

D) 5600 insects

Answer: D

59) The temperature on a December morning is -7°F at 3a.m. If the temperature drops 3° by 4 a.m., rises 8° by 5 a.m., and then drops 7° by 6a.m., find the temperature at 6 a.m.

A) -25°F

B) -9°F

C) 9°F

D) 25°F

Answer: B

60) Tori has \$279 in her checking account. She writes a check for \$23, makes a deposit for \$91, and then writes another check for \$67. Find the amount left in her account. (Write the amount as an integer.)

A) -280 dollars

B) dollars

C) -98 dollars

D) 280 dollars

Answer: D

Subtract.

61) $1 - 3$

A) -4

B) 4

C) 2

D) -2

Answer: D

62) $-7 - 8$

A) -1

B) 15

C) 1

D) -15

Answer: D

63) $-13 - (-5)$

A) 8

B) -18

C) -8

D) 18

Answer: C

64) $13 - (-2)$

A) -15

B) -11

C) 11

D) 15

Answer: D

65) $-13 - 13$

A) 0

B) -13

C) 26

D) -26

Answer: D

66) $-5 - (-5)$

A) 5

B) -5

C) 0

D) 1

Answer: C

67) $0 - (-18)$

A) 0

B) 36

C) -18

D) 18

Answer: D

68) $16 - (-16)$

A) -32

B) 16

C) 0

D) 32

Answer: D

69) $33 - 55$

A) -88

B) 22

C) -22

D) 88

Answer: C

70) $-15 - (-98)$

A) 83

B) -83

C) 113

D) -113

Answer: A

71) $-\frac{3}{5} - \left(-\frac{1}{5}\right)$

A) $-\frac{4}{5}$

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

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

D) $-\frac{2}{25}$

Answer: A

72) $\frac{1}{7} - \left(-\frac{8}{63}\right)$

A) $-\frac{1}{63}$

B) $—$

C) $—$

D) $—$

Answer: B

73) $\frac{5}{8} - 8$

A) $-\frac{3}{8}$

B) $-\frac{69}{8}$

C) $\frac{59}{8}$

D) $-\frac{59}{8}$

Answer: D

74) $\frac{7}{8} - (-2)$

A) $\frac{5}{8}$

B) $\frac{23}{8}$

C) $\frac{9}{8}$

D) $-\frac{9}{8}$

Answer: B

75) $8 - \left(-\frac{5}{6}\right)$

A) $—$

B) $\frac{53}{6}$

C) $\frac{13}{6}$

D) $\frac{43}{6}$

Answer: B

76) $-8.8 - (-2.6)$

A) -11.4

B) -6.2

C) 11.4

D) 6.2

Answer: B

77) $(0.80) - (-0.80)$

A) 0.1

B) 0

C) 1.6

D) -0.64

Answer: C

- 78) $3.98 - 4.96$
 A) 8.94 B) -0.98 C) -8.94 D) 0.98
 Answer: B
- 79) $110 - (-65.5)$
 A) B) -44.5 C) D) -175.5
 Answer: C
- 80) $-10 - (-9.579)$
 A) -0.421 B) C) 19.579 D) -19.579
 Answer: A
- 81) Subtract -2 from 1.
 A) -1 B) 3 C) -3 D) 1
 Answer: B
- 82) Subtract -2 from -10.
 A) 12 B) -8 C) -12 D) D) -12
 Answer: B
- 83) Subtract 36 from -12.
 A) -24 B) -48 C) 48 D) 24
 Answer: B
- 84) Subtract -5 from -27.
 A) 32 B) 22 C) -32 D) -22
 Answer: D
- Combine the numbers.
- 85) $6 + (-10) - (-17)$
 A) -13 B) -1 C) 13 D) -21
 Answer: C
- 86) $-2 - (-17) + (-5)$
 A) -24 B) -10 C) 10 D) -14
 Answer: C
- 87) $20 - (-15) + 15 + (-12)$
 A) 32 B) -8 C) -32 D) 38
 Answer: D
- 88) $-5 + 8 - (-3) + 16$
 A) B) 22 C) -10 D) D) -10
 Answer: B
- 89) $12 + (-18) - (-1) - 7$
 A) -12 B) 2 C) 36 D) 0
 Answer: A

90) $19 + (-12) - (-15) - 19 + (-19)$

A) -8

B) 22

C) -16

D)

Answer: C

91) $15 - 0 - (-2) - 4 + (-8)$

A)

B)

C) 9

D)

Answer: D

92) $-7 - 7 - 5$

A)

B) -9

C) -19

D) -5

Answer: C

93) $-14 + 5 + 1$

A) -10

B) -20

C) -18

D) -8

Answer: D

94) $8.6 - (-1.6) + 1.8$

A) 8.4

B) -5.2

C) 8.8

D) 12

Answer: D

Solve the problem.

95) Sean has \$585 in his savings account. After he withdraws \$35, what will his balance be?

A) \$550

B) \$620

C) -\$620

D) -\$550

Answer: A

96) Trader Tower stands at 2986 feet high. Exchange Emporium is 882 feet tall. How much taller is Trader Tower than Exchange Emporium?

A) 3868 feet

B) 2104 feet

C) -3868 feet

D) -2104 feet

Answer: B

97) The temperature at 5:00 was -3°C . Four hours later, it was -9°C . What was the change in temperature?

A) -6°C

B) 12°C

C) -12°C

D) 6°C

Answer: A

98) The difference between a country's exports and imports is called the country's trade balance. If a country had \$137 billion in exports and \$280 billion in imports, what was the country's trade balance?

A) \$417 billion

B) \$143 billion

C) -\$143 billion

D) -\$417 billion

Answer: C

99) A plane is flying over the ocean at a height of 12,060 feet above sea level. The depth of the ocean directly below the plane is 17,087 feet. How high is the plane above the ocean floor?

A) 29,147 feet

B) 29,247 feet

C) 5027 feet

D) 5127 feet

Answer: A

Multiply.

100) $(2)(-5)$

A) -110

B) -10

C) -100

D) -12

Answer: B

- 101) $(-9)(2)$
 A) -18 B) -20 C) -118 D) -180
 Answer: A
- 102) $(-4)(-9)$
 A) -36 B) 72 C) 36 D) 46
 Answer: C
- 103) $-14(0)$
 A) -28 B) 0 C) 14 D) -14
 Answer: B
- 104) $-\left(\frac{54}{49}\right)\left(\frac{7}{9}\right)$
 A) $-1\frac{5}{49}$ B) $\frac{6}{7}$ C) $\frac{7}{9}$ D) $-\frac{6}{7}$
 Answer: D
- 105) $\left(\frac{13}{5}\right)\left(-\frac{7}{3}\right)$
 A) -27 B) $-\frac{91}{15}$ C) -182 D) $-\frac{9}{10}$
 Answer: B
- 106) $\left(-\frac{3}{10}\right)\left(-\frac{1}{5}\right)$
 A) $-\frac{6}{25}$ B) $\frac{9}{25}$ C) $\frac{3}{50}$ D) $-\frac{1}{25}$
 Answer: C
- 107) $3.6(-6.00)$
 A) 9.7 B) 9.6 C) -21.6 D) -2.4
 Answer: C
- 108) $-2.3(-14)$
 A) 16.3 B) 32.2 C) -16.3 D) -11.7
 Answer: B
- 109) $3\left(-\frac{3}{4}\right)$
 A) — B) -4 C) D) $-\frac{9}{4}$
 Answer: D
- 110) $2(6)(-9)$
 A) -108 B) 108 C) 3 D) -1
 Answer: A

111) $2(5)(-2)(1)$

A) 6

B) -6

C) 20

D) -20

Answer: D

112) $-5(2)(2)(-3)(-1)$

A) -5

B) 5

C) -60

D) 60

Answer: C

113) $4(-5)(0)(-4)$

A) 0

B) -5

C) -80

D) 80

Answer: A

114) $3(0.004)(70)(-0.8)$

A) 6.72

B) 0.672

C) -6.72

D) -0.672

Answer: D

115) $(4.4)(8.5)(-5.9)(-6.2)$

A) -1368.092

B) -220.66

C) 220.66

D) 1368.092

Answer: D

116) $(-1000)(0.08)(-97)(11)\left(-\frac{1}{10}\right)$

A) -853.6

B) 8536

C) 853.6

D) -8536

Answer: D

117) $\left(\frac{2}{7}\right)\left(-\frac{3}{8}\right)\left(-\frac{1}{6}\right)$

A) $-\frac{2}{21}$

B) $-\frac{3}{28}$

C) —

D) —

Answer: D

118) $\left(\frac{7}{10}\right)\left(-\frac{5}{19}\right)\left(-\frac{4}{5}\right)$

A) —

B) $-\frac{2}{7}$

C) —

D) $-\frac{7}{38}$

Answer: A

119) $\left(\frac{2}{7}\right)\left(\frac{4}{5}\right)\left(-\frac{5}{9}\right)\left(\frac{5}{8}\right)$

A) $-\frac{1}{420}$

B) $\frac{5}{63}$

C) $\frac{1}{420}$

D) $-\frac{5}{63}$

Answer: D

Divide and write the answer in simplest form.

120) $-85 \div 5$

A) -27

B) 17

C) -17

D) $-\frac{1}{17}$

Answer: C

121) $138 \div (-6)$

A) -23

B) -33

C) $-\frac{1}{23}$

D) 23

Answer: A

122) $0 \div 40$

A) -40

B) 0

C) Undefined

D) 1

Answer: B

123) $-102 \div (-6)$

A) 17

B) $\frac{1}{17}$

C) 7

D) -17

Answer: A

124) $-8.1 \div 0.09$

A) -80.1

B) -8.01

C) -90

D) $\frac{1}{90}$

Answer: C

125) $-7.2 \div 9$

A) -0.8

B) 8

C) -8

D) -0.08

Answer: A

126) $-\frac{5}{4} \div \frac{11}{3}$

A) $\frac{15}{44}$

B) $-\frac{55}{12}$

C) $-\frac{15}{44}$

D) $\frac{55}{12}$

Answer: C

127) $-\frac{1}{3} \div \left(-\frac{5}{14}\right)$

A) $\frac{14}{15}$

B) $-\frac{5}{42}$

C) $-\frac{14}{15}$

D) $\frac{15}{14}$

Answer: A

128) $\frac{3}{5} \div \left(-\frac{9}{13}\right)$

A) $\frac{13}{15}$

B) $-\frac{13}{15}$

C) $\frac{15}{13}$

D) $-\frac{27}{65}$

Answer: B

129)

$$\frac{\frac{1}{2}}{\frac{1}{9}}$$

- A) — B) $\frac{4}{15}$ C) — D) $\frac{1}{2}$

Answer: A

Solve the problem.

130) At the end of last year, Widgets Unlimited, Inc. posted a net income of -\$223.4 billion. If this continues, what would its income be after three years?

- A) -\$670.2 billion B) -\$226.4 billion C) -\$6702 billion D) \$670.2 billion

Answer: A

131) Chris lost \$9.08 playing poker in one week. If this continued, what would be his net winnings or losses after five weeks?

- A) \$45.40 B) -\$4540.00 C) -\$454.00 D) -\$45.40

Answer: D

132) Ben lost \$160 on each of 8 consecutive days in the stock market. If he had \$15,339 before his loss, how much does he have after his loss?

- A) \$1280 B) \$15,179 C) \$16,619 D) \$14,059

Answer: D

133) A weather forecaster predicts that the temperature will drop 3 degrees each hour for the next 5 hours. If the temperature is -3 degrees before the temperature starts falling, what is the temperature after the drop?

- A) 15° B) -11° C) -15° D) -18°

Answer: D

134) Your favorite stock opened the day's trading at \$43.21 per share. When trading closed for the day, your stock was priced at \$35.50 per share. If you own 120 shares, what was your profit or loss that day?

- A) A loss of \$7.71 B) A loss of \$925.20 C) A profit of \$925.20 D) A profit of \$7.71

Answer: B

135) Christina made a chart summarizing her shop's financial performance over the past three years.

Description of Month	Number of Months	Average Monthly Income or Loss (in hundreds of dollars)
Excellent	6	+\$16
Good	9	+\$6
Neutral	15	\$0
Poor	4	-\$3
Very poor	2	-\$5

How much money was made in the months described as "Good"?

- A) \$5400 B) \$1000 C) \$1200 D) \$9600

Answer: A

136) Christina made a chart summarizing her shop's financial performance over the past three years.

Description of Month	Number of Months	Average Monthly Income or Loss (in hundreds of dollars)
Excellent	6	+\$18
Good	9	+\$5
Neutral	15	\$0
Poor	4	-\$1
Very poor	2	-\$4

How much money was lost in the months described as "Poor"?

- A) \$4500 B) \$10,800 C) \$800 D) \$400

Answer: D

137) The table below summarizes the plays that a football team made while in possession of the football during their game.

Type of Play	Number of Plays	Average Yards Gained or Lost per Play
Large gain	4	+25
Medium gain	7	+15
Small gain	6	+5
Zero gain	10	0
Small loss	9	-5
Medium loss	5	-10
Large loss	1	-15

If the total yards gained in small gains were combined with the total yards lost in small losses, what would be the result?

- A) A loss of 3 yards B) A gain of 75 yards C) A loss of 15 yards D) A gain of 15 yards

Answer: C

138) Adam owes \$5400 in student loans. If he agrees to consolidate the loans and repay the total amount over 60 months, what would his monthly payment be?

- A) \$90 B) \$540 C) \$600 D) \$450

Answer: A

139) Juanita arranged for a car loan of \$11,200. If her monthly payments are \$560, how many months will it take her to pay off the loan?

- A) 80 months B) 20 months C) 70 months D) 200 months

Answer: B

140) Sally will pay \$10,560 on her student loan over the next 4 years. If \$220 is automatically deducted from her bank account each month to pay off the loan, how much does she still owe after one year?

- A) \$7920 B) \$13,200 C) \$2640 D) \$8360

Answer: A

Write the expression in exponent form.

141) $(5)(5)$

- A) 2^5 B) $2 \cdot 5$ C) 5^2 D) 5^3

Answer: C

- 142) $(7)(7)(7)$
 A) 3^7 B) 7^3 C) 7^1 D) $3 \cdot 7$
 Answer: B
- 143) $(19)(19)(19)(19)$
 A) 19^4 B) 19^1 C) 4^{19} D) $4 \cdot 19$
 Answer: A
- 144) $(7)(7)(7)(7)(7)$
 A) 5^7 B) $7 \cdot 5$ C) 7^5 D) 7^7
 Answer: C
- 145) $(4)(4)(4)(4)(4)(4)$
 A) 4^6 B) 6^4 C) 4^5 D) 24
 Answer: A
- 146) $(4)(4)(2)(2)(2)(2)$
 A) $(2^4)(4^2)$ B) $(4^2)(2^4)$ C) 8^6 D) $(4)(2^6)$
 Answer: B
- 147) $(x)(x)(x)(x)$
 A) 4 B) 4^x C) x^4 D) $4x$
 Answer: C
- 148) $-2(x)(x)(x)(x)$
 A) $(-2x)^4$ B) $-2(4^x)$ C) $-2x^4$ D) $-(2x)^4$
 Answer: C
- 149) $(12y)(12y)(12y)(12y)(12y)$
 A) $12y^5$ B) $(12y)^5$ C) $60y^5$ D) $5y^{12}$
 Answer: B
- Evaluate.
- 150) 5^2
 A) -25 B) -10 C) 10 D) 25
 Answer: D
- 151) -3^2
 A) -6 B) 6 C) 9 D) -9
 Answer: D
- 152) $(-7)^3$
 A) 21 B) -21 C) 343 D) -343
 Answer: D

- 153) $(-6)^2$
 A) 36 B) 12 C) -36 D)
 Answer: A
- 154) 2^9
 A) 512 B) 81 C) 256 D) 18
 Answer: A
- 155) $\left(\frac{2}{3}\right)^3$
 A) $3\frac{2}{3}$ B) $\frac{8}{27}$ C) $\frac{27}{8}$ D) $\frac{8}{3}$
 Answer: B
- 156) $\left(\frac{1}{8}\right)^2$
 A) $\frac{1}{64}$ B) $\frac{1}{10}$ C) $\frac{1}{16}$ D) $\frac{1}{4}$
 Answer: A
- 157) $\left(\frac{6}{7}\right)^4$
 A) $\frac{24}{7}$ B) $\frac{1296}{7}$ C) $\frac{1}{4}$ D) $\frac{1296}{2401}$
 Answer: D
- 158) $(0.7)^2$
 A) 1.4 B) 0.49 C) 49 D) 0.35
 Answer: B
- 159) $(1.5)^3$
 A) 4.5 B) 4.096 C) 3.375 D) 2.25
 Answer: C
- 160) $8^2 + 3^4$
 A) 97 B) 28 C) 76 D) 145
 Answer: D
- 161) $5^3 - 3^2$
 A) B) 134 C) D)
 Answer: D
- 162) $(-12)^2 - (-6)^3$
 A) 360 B) -72 C) 72 D) -360
 Answer: A

- 163) $(-10)^2(-7)^3$
 A) 420 B) 34,300 C) -420 D) -34,300
 Answer: D
- 164) $9^2(-6)^3$
 A) 1458 B) 17,496 C) -17,496 D) -1458
 Answer: C
- 165) $7^3 - (-9)^2$
 A) B) 39 C) 424 D) -60
 Answer: A
- 166) $2^3 - (-4)^4$
 A) 265 B) -248 C) 264 D) 22
 Answer: B
- 167) $(10 - 4)^2 \div 3 \times 4$
 A) 48 B) 27 C) 3 D)
 Answer: A
- 168) $19 \cdot 11 + 16 \cdot 13$
 A) 6669 B) 417 C) 2925 D) 4161
 Answer: B
- 169) $6 + 60 \div 60 \cdot 2^2$
 A) $\frac{33}{5}$ B) 9 C) 10 D) $\frac{264}{5}$
 Answer: C
- 170) $79 - 17 \cdot 2 + 114 \div (-6)$
 A) -30 B) -1199 C) 26 D) 105
 Answer: C
- 171) $(-5 - 2)(-4 + 5) - 4^2$
 A) 16 B) 1 C) 9 D) -23
 Answer: D
- 172) $7 \cdot 7 - 5(2)^2 \div (-2)$
 A) -88 B) 59 C) 99 D) $-\frac{29}{2}$
 Answer: B
- 173) $9 \cdot 2 - 6(3 - 5)^2$
 A) -25 B) -126 C) 48 D) -6
 Answer: D

$$174) \frac{3}{5} \div \frac{3}{5} - 10 \cdot \left(\frac{1}{2}\right)^2$$

A) - 24

B) $-\frac{9}{10}$

C) $-\frac{9}{4}$

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

Answer: D

$$175) \frac{1}{2} + \frac{1}{2} \div \left(-\frac{2}{5}\right) \cdot \frac{3}{4}$$

A) $-\frac{7}{6}$

B) $-\frac{7}{16}$

C) $-\frac{10}{3}$

D) $-\frac{15}{8}$

Answer: B

$$176) 1.8 - 2.7 \div 2.5 \cdot (5.2 - 5.4)^2$$

A) -9

B) -25.2

C) -0.0144

D) 1.7568

Answer: D

Solve the problem.

177) Scores in golf can be positive or negative integers. For example, a score of 7 over par can be represented by +7 and a score of 2 under par can be represented by -2. If Donna had scores of 6 over par, 4 under par, and 5 under par for three games of golf, what was her total score?

A) 15 or 15 over par

B) 3 or 3 over par

C) -15 or 15 under par

D) -3 or 3 under par

Answer: D

Use the distributive property to simplify.

$$178) -(-2m + 5n - 9p)$$

A) $-2m + 5n + 9p$

B) $2m - 5n + 9p$

C) $2m - 5n - 9p$

D) $-2m + 5n - 9p$

Answer: B

$$179) 6(x + 8y)$$

A) $6 + 48y$

B) $6x + 48y$

C) $6x + 8y$

D) $6x - 48y$

Answer: B

$$180) 7(3a - 1b)$$

A) $14ab$

B) $21a - 1b$

C) $a - 7b$

D) $21a - 7b$

Answer: D

$$181) -2(-12a - 8b - 12)$$

A) $24a + 16b$

B) $24a - 8b - 12$

C) $24a + 16b + 24$

D) $24a + 16b - 24$

Answer: C

$$182) -6x(x - 5y - 6z)$$

A) $-6x^2 - 5y - 6z$

B) $-6x^2 - 30xy - 36xz$

C) $-6x^2 + 30xy + 36xz$

D) $-6x + 30y + 36z$

Answer: C

$$183) (-4x - 9y - 2)(-2x)$$

A) $8x^2 - 9y - 2$

B) $-4x - 9y + 4x$

C) $8x^2 + 18xy + 4x$

D) $8x + 18y + 4$

Answer: C

184) $\frac{2}{5}(20x^2 + 15x - 10)$

A) $x^2 - 6x + 4$

B) $x^2 + 6x - 4$

C) $x^2 + 30x - 20$

D) $x^2 + 15x - 10$

Answer: B

185) $(-3x + 4y + 4)(3xy)$

A) $-9x^2 + 12y^2 + 12xy$

B) $-9x^2y + 12xy^2 + 12xy$

C) $-3x + 4y + 12xy$

D) $-9x^2y - 12xy^2 - 12xy$

Answer: B

186) $-0.9(1.9x^2 - 1.71x - 2.565)$

A) $-1.71x^2 + 1.539x - 2.565$

B) $-1.71x^2 - 1.539x - 2.3085$

C) $-1.71x^2 + 1.539x + 2.3085$

D) $-1.71x^2 - 1.71x - 2.565$

Answer: C

187) $\frac{y}{5}(4y - x - 15)$

A) $\frac{4}{5}y^2 - x - 15$

B) $\frac{4}{5}y^2 - \frac{xy}{5} - 3y$

C) $\frac{4}{5}y^2 - \frac{x}{5} - 3$

D) $\frac{4}{5}y^2 + \frac{xy}{5} + 3y$

Answer: B

Solve the problem.

188) A living room is 15 feet wide. The carpeted portion of the room is $5x$ feet long and the adjacent tiled portion of the room is $9y$ feet long. Use the distributive property to find an expression for the total area of the living room.

A) $75x + 9y$ square feet

B) $20x + 24y$ square feet

C) $75x + 135y$ square feet

D) $210(x + y)$ square feet

Answer: C

189) The quad at State University is $5x$ feet wide. Initially, it was 1200 feet long. However, due to the construction of a new science building, the original length was decreased by $3y$ feet. Use the distributive property to find an expression for the area of the new quad.

A) $6000x + 15xy$ square feet

B) $6000x - 15xy$ square feet

C) $6000x + 3600y$ square feet

D) $6000x - 3600y$ square feet

Answer: B

190) The price of a desk was $5y$. During a sale, the price was reduced by \$150. The store sold $4x$ desks during the first week of the sale. Write an expression with parentheses to represent the value of the desks sold during the first week. Then use the distributive property to write the expression without parentheses.

A) $4x(5y - 150) = 20xy - 600x$ dollars

B) $5y(4x - 150) = 20xy - 750y$ dollars

C) $4x(5y - 150) = 20xy - 600$ dollars

D) $4x(5y - 150) = 20xy - 150$ dollars

Answer: A

191) Sara is in charge of painting a mural on the side of a building. The wall is 47 meters long. The wall is $7x$ meters high up to the window ledge and it is $4y$ meters from the window ledge to the top. Write an expression with parentheses for the area of the wall. Then use the distributive property to write the expression without parentheses.

A) $7x(4y + 47) = 28xy + 47$ square meters

B) $47(7x + 4y) = 329x + 188y$ square meters

C) $47(7x + 4y) = 329x + 4y$ square meters

D) $7x(4y + 47) = 28xy + 329x$ square meters

Answer: B

List the like terms of the expression.

192) $9x - 6x + 2$

A) There are no like terms

B) $9x$ and 2 are like terms

C) $9x$, $-6x$, and 2 are like terms

D) $9x$ and $-6x$ are like terms

Answer: D

193) $-12a - 9b - 3b + 3a$

A) There are no like terms

B) $-12a$ and $-9b$ are like terms

C) $-12a$ and $3a$ are like terms

$-3b$ and $3a$ are like terms

$-9b$ and $-3b$ are like terms

D) $-12a$, $3a$, $-9b$ and $-3b$ are like terms

Answer: C

194) $-6y + 3 - 5 + 5x + y - 3$

A) $-6y$, $5x$, and y are like terms

B) $-6y$ and y are like terms

3 , -5 , and -3 are like terms

3 , -5 , $5x$, and -3 are like terms

C) $-6y$ and y are like terms

D) $-6y$ and y are like terms

3 , -5 , and -3 are like terms

Answer: C

195) $-12pq + 5pq^2 - 4p^2q - 8pq$

A) $-12pq$ and $-8pq$ are like terms

B) $-12pq$, $5pq^2$, $-4p^2q$, $-8pq$ are like terms

$5pq^2$ and $-4p^2q$ are like terms

C) There are no like terms

D) $-12pq$ and $-8pq$ are like terms

Answer: D

196) $-12xy + 5xy^2 - 7x^2y - 5xy^2 + xy$

A) $5xy^2$ and $-5xy^2$ are like terms

B) $-12xy$ and xy are like terms

$5xy^2$, $-7x^2y$, and $-5xy^2$ are like terms

C) $-12xy$ and xy are like terms

D) $-12xy$ and xy are like terms

$5xy^2$ and $-5xy^2$ are like terms

Answer: D

197) $3x^6 + 6x^2 - 8 + 8x^6 - 2x^2 + 7x$

A) $3x^6$, $6x^2$, $8x^6$ and $-2x^2$ are like terms

C) $3x^6$ and $8x^6$ are like terms

$6x^2$, $-2x^2$, and $7x$ are like terms

B) $3x^6$ and $8x^6$ are like terms

$6x^2$ and $-2x^2$ are like terms

-8 and $7x$ are like terms

D) $3x^6$ and $8x^6$ are like terms

$6x^2$ and $-2x^2$ are like terms

Answer: D

Combine like terms.

198) $6x - 3x + 3$

A) $-3x + 3$

B) $3x + 3$

C) $9x + 3$

D) $6x$

Answer: B

199) $7a + 4b + 5 - 9b + 4a + 2$

A) $11a - 5b + 7$

B) $11a^2 - 5b^2 + 7$

C) $11a - 2b + 6$

D) ab

Answer: A

200) $9x^2 + 6x - 4 + 2x + 9 + 8x^2$

A) $x^2 + 11x + 15$

B) $17x^2 + 8x + 5$

C) $17x^4 + 8x^2 + 5$

D) $30x^3$

Answer: B

201) $4pq - 9p + 7q + 6p + 7pq + 2$

A) $17pq$

B) $11pq - 3p + 9q$

C) $11pq + 10p + 6q + 2$

D) $11pq - 3p + 7q + 2$

Answer: D

202) $2ab + 2bc - 7ac - 6bc + 9ab$

A) $11ab - 4bc - 7ac$

C) $2ab - 4bc - 7ac$

B) $11ab + 2bc + 2ac$

D) $11ab + 2bc - 7ac - 6abc$

Answer: A

203) $9n - 2n^4 + 9n + 9n^4$

A) $18n - 2n^4 + 9$

B) $9n + 7n^4 + 9$

C) $9n + 5n^4$

D) $18n + 7n^4$

Answer: D

204) $5.1x - 1.6y - 3.4x + 8y + 2.4x$

A) $4.1x + 6.4y$

B) $4.1x + 9.6y$

C) $4.1x - 1.6y + 8$

D) $10.9x + 6.4y$

Answer: A

205) $-\frac{8}{9}s - \frac{2}{3}t + \frac{3}{5}s + \frac{3}{5}t$

A) $-\frac{13}{45}s - \frac{1}{15}t$

B) $-\frac{8}{9}s - \frac{1}{15}t + \frac{3}{5}$

C) $-\frac{1}{9}s - \frac{1}{15}t$

D) $-\frac{13}{45}s - \frac{2}{3}t + \frac{3}{5}$

Answer: A

$$206) \frac{3}{5}x - \frac{3}{4}y^2 - \frac{3}{4}x + \frac{1}{3}y^2$$

$$A) -x - \frac{5}{12}y^2$$

$$B) -\frac{3}{20}x^2 - \frac{5}{12}y^4$$

$$C) -\frac{3}{20}x - \frac{5}{12}y^2$$

$$D) -\frac{3}{20}x - \frac{3}{4}y^2 + \frac{1}{3}y$$

Answer: C

$$207) 11ab + 4 + 19ab^2 + 7 + 3ab^2 + 2ab + 20a^2b^2$$

$$A) 20a^2b^2 + 35ab^2 + 11$$

$$C) 42a^2b^2 + 13ab + 11$$

$$B) 20a^2b^2 + 22ab^2 + 13ab + 11$$

$$D) 11ab + 4 + 19ab^2 + 7 + 3ab^2 + 2ab + 20a^2b^2$$

Answer: B

Simplify the expression, and combine like terms.

$$208) -(9y - 3) + 6(9y + 6)$$

$$A) 45y + 9$$

$$B) 45y + 39$$

$$C) 45y + 3$$

$$D) 45y + 33$$

Answer: B

$$209) -9(5x + 10y) + 4(4x + 10y)$$

$$A) -4x - 50y$$

$$B) -29x + 10y + 10$$

$$C) -29x - 50y$$

$$D) -135xy$$

Answer: C

$$210) -2(7xy + 9y^2) + 2y(4x + 7y)$$

$$A) -32xy^3 + 4x + 7y$$

$$B) xy + 7$$

$$C) -6xy + 9y^2 + 7y$$

$$D) -6xy - 4y^2$$

Answer: D

$$211) 5(3a + 6b) - (4a - 2b)$$

$$A) 19a + 32b$$

$$B) 11a + 8b$$

$$C) 11a + 28b$$

$$D) 11a + 32b$$

Answer: D

$$212) 2(3x^2 + 9y) - (9x^2 - 4y)$$

$$A) 15x^2 + 13y$$

$$B) -3x^2 + 14y$$

$$C) -3x^2 + 22y$$

$$D) 15x^2 + 22y$$

Answer: C

$$213) 6(2a^2 + 9ab) - a(2a - 5b)$$

$$A) 14a^2 + 59ab$$

$$B) 14a^2 + 9ab - 5b$$

$$C) 10a^2 + 59ab$$

$$D) 10a^2 + 49ab$$

Answer: C

$$214) 11n(m + 2n) + 3(7mn + 6n^2)$$

$$A) 32mn + 40n^2$$

$$B) 32mn + 6n^2 + 2n$$

$$C) 32mn + 18n^2 + 22n$$

$$D) 21mn + 22n^2$$

Answer: A

$$215) 5(2 - x) - 6(7 - 4x)$$

$$A) -5x - 32$$

$$B) 19x - 32$$

$$C) -29x - 32$$

$$D) 3x + 3$$

Answer: B

Solve the problem by combining like terms.

- 216) To convert from meters to centimeters, we multiply by 100. For example, the number of centimeters in 3 meters is $100 \cdot 3 = 300$. If one piece of string has a length of $x - 2$ meters, and another piece of string has a length of $8x + 5$ centimeters, express their total length in centimeters as an algebraic expression.

A) $801x + 498$ centimeters
B) $108x - 195$ centimeters
C) $900x + 300$ centimeters
D) $9x + 3$ centimeters

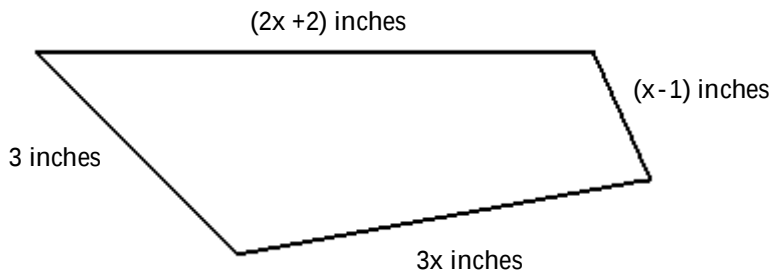
Answer: B

- 217) The value of 8 dimes is $10 \cdot 8 = 80$ cents. Likewise, the value of x dimes is $10x$ cents. If George finds $4x - 2$ nickels, $5x$ dimes, and x quarters in his change jar, express the total value of change in cents as an algebraic expression.

A) $95x - 10$ cents
B) $95x + 10$ cents
C) $70x - 10$ cents
D) $95x - 2$ cents

Answer: A

- 218) Given the following quadrilateral, express the perimeter, or total distance around the figure, as an algebraic expression containing the variable x .



A) $6x + 4$ inches
B) $5x + 6$ inches
C) $5x + 4$ inches
D) $6x + 6$ inches

Answer: A

- 219) A triangle has sides of length $9a + 11$ inches, $13a + 16b$ inches, and $18b + 20$ inches. What is the perimeter of the triangle?

A) $22a + 34b + 31$ inches
B) $22a + 16b + 31$ inches
C) $56ab + 31$ inches
D) $22a + 34b + 20$ inches

Answer: A

- 220) Find the perimeter of a triangle whose sides are of lengths $5x$, $5x - 5$, and x .

A) $5x$
B) $10x - 5$
C) $11x - 5$
D) $25x^2 - 25x$

Answer: C

- 221) Find the perimeter of a square with sides of length $x + 5$.

A) $4x + 20$
B) $x + 20$
C) $4x + 5$
D) $x^2 + 25$

Answer: A

- 222) A rectangle has sides of length $8x + 3$ meters and $4x - 5$ meters. What is the perimeter of the rectangle?

A) $24x - 4$ meters
B) $20x$ meters
C) $12x - 2$ meters
D) $24x - 2$ meters

Answer: A

Evaluate.

- 223) $9x + 7$ for $x = 5$

A) 38
B) 90
C) 16
D) 52

Answer: D

224) $2x + 1$ for $x = -3$

A) -5

B) -7

C) 7

D) 5

Answer: A

225) $9x - 7$ for $x = \frac{1}{4}$

A)

B) —

C) $\frac{37}{4}$

D) $-\frac{19}{4}$

Answer: D

226) $-\frac{2}{5}x - 7$ for $x = 12$

A) $-\frac{59}{5}$

B) $-\frac{11}{2}$

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

D) -55

Answer: A

227) $-3 - 7x$ for $x = -6$

A) -4

B) -45

C)

D) -16

Answer: C

228) $-1.6(3.1 - x)$ for $x = 3.7$

A) -0.96

B) 8.66

C) 0.96

D) -8.66

Answer: C

229) $4x^2$ for $x = -10$

A) 400

B) 80

C) -80

D) -400

Answer: A

230) $-10x^2$ for $x = -12$

A) 1440

B) -1440

C) -240

D) 240

Answer: B

231) $(4x)^2 + 9x$ for $x = 2$

A) 73

B)

C) 82

D)

Answer: C

232) $-7 - x^2$ for $x = -12$

A) -151

B) -31

C) 137

D) 17

Answer: A

233) $3x^2 + 2x + 4$ for $x = -2$

A) -12

B)

C) -4

D)

Answer: D

234) $8x^2 + 9x$ for $x = 4$

A) 68

B) 164

C) 100

D) 92

Answer: B

235) $\frac{11}{8}x^2 - 1$ for $x = 3$

A) $8\frac{1}{8}$

B) $12\frac{1}{4}$

C) $7\frac{1}{4}$

D) $11\frac{3}{8}$

Answer: D

236) $-x^2 - 6z$ for $x = -2$, $z = -4$

A) 16

B) -28

C) -20

D) 20

Answer: D

237) $-3xy + 8y - 8$ for $x = 3$, $y = 1$

A)

B) -1

C) 9

D) -9

Answer: D

238) $\frac{14x - 6y}{x + 12}$ for $x = 7$, $y = 4$

A) $\frac{14}{19}$

B) $\frac{7}{8}$

C) $\frac{37}{8}$

D) $\frac{74}{19}$

Answer: D

239) $2x^2 - 3xy + 3y^2$ for $x = 6$ and $y = -5$

A) 248

B) 459

C) 129

D) 237

Answer: D

240) $\frac{y - 2x}{6x + xy}$ for $x = -3$ and $y = 4$

A) $-\frac{1}{3}$

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

C) $\frac{1}{15}$

D) $-\frac{2}{15}$

Answer: A

241) $a^2 - 8abc - c^2$ for $a = -5$, $b = 9$, and $c = 4$

A)

B)

C)

D) -1431

Answer: C

242) $\frac{a^2 - 5ab}{2b}$ for $a = -3$ and $b = -2$

A) $-\frac{39}{4}$

B) $-\frac{21}{4}$

C) $\frac{21}{4}$

D) $\frac{7}{2}$

Answer: C

Solve the problem.

243) A poster is in the shape of a parallelogram. The base measures 33 inches, and the altitude measures 25 inches. What is the area of the poster?

A) 825 square feet

B) 116 square feet

C) 1650 square feet

D) 58 square feet

Answer: A

244) A square component in a television set measures 16 centimeters per side. Next year's design will contain the same square component, but its side will measure only 10 centimeters. By how much will the area of the square be decreased?

- A) 156 square centimeters
C) 36 square centimeters
B) 24 square centimeters
D) 100 square centimeters

Answer: A

245) A window is in the shape of a trapezoid. The altitude of the window is 30 inches. One base measures 54 inches, and the other base measures 56 inches. What is the area of the window?

- A) 90,720 square inches
C) 1650 square inches
B) 3300 square inches
D) 30 square inches

Answer: C

246) In a home economics class, students cut triangular pieces of fabric for a quilt. Each triangle had a base of 20 centimeters and an altitude of 28 centimeters. What was the area of each triangular piece of fabric?

- A) 24 square centimeters
C) 280 square centimeters
B) 560 square centimeters
D) 1120 square centimeters

Answer: C

247) A circular pizza in a contest for the world's largest pizza has a radius of 7 feet. What is the area of the pizza? (Use $\pi \approx 3.14$ and round to 2 decimal places, if necessary.)

- A) 43.96 square feet
B) 307.72 square feet
C) 49 square feet
D) 153.86 square feet

Answer: D

248) The expression $\frac{5}{9}(F - 32)$ can be used to convert Fahrenheit to Celsius degrees. On January 29, the high temperature was 77° F. Find the corresponding Celsius temperature (to the nearest degree).

- A) 11°C
B) 43°C
C) 25°C
D) 81°C

Answer: C

249) The temperature recorded on a thermometer was 21°C. Find the corresponding temperature in degrees Fahrenheit. Use the formula $F = \frac{9}{5}C + 32$.

- A) 43.7°F
B) -20.3°F
C) 5.8°F
D) 69.8°F

Answer: D

250) Aaron's map shows that he needs to drive 78 more kilometers to reach his destination. Approximately how many more miles must he drive? Use the formula Miles = 0.62k, where k is the number of kilometers. (Round to the nearest tenth of a mile.)

- A) 43.6 miles
B) 59.9 miles
C) 48.4 miles
D) 125.6 miles

Answer: C

251) Find the total cost of tiling a rectangular floor that is 10 meters long and 3 meters wide if it costs \$8.07 to tile one square meter. Round to the nearest cent.

- A) \$30.00
B) \$104.91
C) \$209.82
D) \$242.10

Answer: D

252) A semicircular window of radius 20 inches is to be laminated with a coating that costs \$1.10 per square inch to apply. What is the total cost of coating the window, to the nearest cent? (Use $\pi \approx 3.14$).

A) \$345.40

B) \$138.16

C) \$690.80

D) \$4338.22

Answer: C

Simplify by removing grouping symbols and combining like terms.

253) $4x - 2(x - 6y)$

A) $x + 12y$

B) $x - 6y$

C) $x + 12y$

D) $x - 12y$

Answer: C

254) $-4(2x - y) - 6(x - 2y)$

A) $-14x - 8y$

B) $-14x - 3y$

C) $-14x + 16y$

D) $-14x + 2y$

Answer: C

255) $3m[6m^2 + 4(7 - m)]$

A) $m^3 - 4m + 28$

B) $m^3 + 12m^2 + 84m$

C) $m^3 - 3m^2 + 84m$

D) $m^3 - 12m^2 + 84m$

Answer: D

256) $-4[3(4x - y) - 3(x + 2y)]$

A) $-36x - 4y$

B) $-51x + 6y$

C) $-36x + 36y$

D) $-36x - 12y$

Answer: C

257) $5(a + 2b) - [2 - 3(a - b)]$

A) $8a + 7b - 2$

B) $2a + 7b - 2$

C) $2a + 5b - 2$

D) $8a + 13b - 2$

Answer: A

258) $3[a - b(4a + 3b) + 3b^2]$

A) $3a - 4ab$

B) $3a - 12ab + 18b^2$

C) $3a + 9b - 12ab + 9b^2$

D) $3a - 12ab$

Answer: D

259) $3x(4x^2 + 2x + 6) - 5x(6 - x)$

A) $12x^3 + 2x^2 - 12x$

B) $12x^3 - 29x + 6$

C) $12x^2 + 11x - 12$

D) $12x^3 + 11x^2 - 12x$

Answer: D

260) $3x^2 - 2[2y - 6y(y + 5)]$

A) $3x^2 + 12y^2 + 56y$

B) $3x^2 - 12y^2 - 64y$

C) $3x^2 + 12y^2 - 4y - 10$

D) $3x^2 + 8y + 60$

Answer: A

261) $3a - \{3b - 6[a - (b + -4a)]\}$

A) $5a - 5b$

B) $-27a + 3b$

C) $33a - 9b$

D) $-15a - 9b$

Answer: C

262) $4\{8y^2 + 6[3y^2 - (y + z^2)]\}$

A) $104y^2 - 4y + 4z^2$

B) $50y^2 - 6y - 6z^2$

C) $104y^2 - 24y - 24z^2$

D) $80y^2 - 24y$

Answer: C

Simplify.

263) $-1.3 + 0.3 + (-0.4) + 0.2$

A) 2.4

B) 1.4

C) -1.2

D) -0.4

Answer: C

264) $-12 - (-2)$

A) 10

B) -10

C) -14

D) 14

Answer: B

265) $\left(-\frac{4}{3}\right)(2)$

A) $\frac{8}{3}$

B) $-\frac{3}{2}$

C) $-\frac{8}{3}$

D) —

Answer: C

266) $-1(3)(3)(5)$

A) -10

B) 45

C)

D) -45

Answer: D

267) $-36 \div (-3)$

A) 12

B) 2

C) $\frac{1}{12}$

D) -12

Answer: A

268) $-2.4 \div 0.03$

A) -23.7

B) $\frac{1}{80}$

C) -2.37

D) -80

Answer: D

269) $(-6)^3$

A) 216

B) 18

C) -216

D) -18

Answer: C

270) $(0.5)^3$

A) 0.25

B) 1.5

C) 0.125

D) 0.216

Answer: C

271) $\left(\frac{2}{5}\right)^2$

A) $\frac{25}{4}$

B) $2\frac{2}{5}$

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

D) $\frac{4}{25}$

Answer: D

272) $6 \cdot 9 - 5(3)^2 \div (-3)$

A) -147

B) 69

C) 129

D) -3

Answer: B

273) $4.1 - 9.1 \div 2.5(6.5 - 7.3)^2$

A) 1.7704

B) -3.125

C) -1.5875

D) -1.28

Answer: A

274) $-2x(9x - 2y - 3)$

A) $-18x + 4y + 6$

B) $x - 2y + 6x$

C) $-18x^2 - 2y - 3$

D) $-18x^2 + 4xy + 6x$

Answer: D

275) $-2xy^2(3x + 2y + 5xy)$

A) $-6xy^2 - 4y^3 - 10xy^3$

B) $-6x^2y^2 + 2y + 5xy$

C) $-6x^2y - 4xy^2 - 10x^2y^2$

D) $-6x^2y^2 - 4xy^3 - 10x^2y^3$

Answer: D

276) $7ab - \frac{1}{2}a^2b - \frac{7}{2}ab - \frac{5}{2}a^2b$

A) $\frac{7}{2}ab - \frac{1}{2}a^2b - \frac{5}{2}ab^2$

B) $\frac{7}{2}ab - 3a^2b$

C) $-a^2b^2$

D) $7ab - 3a^2b - \frac{7}{2}ab^2$

Answer: B

277) $5.9x^2y - 1.7xy^2 - 3.6x^2y + 9xy^2 + 2.7x^2y$

A) $5x^2y + 10.7xy^2$

B) $12.2x^2y + 7.3xy^2$

C) $5x^2y + 7.3xy^2$

D) $5x^2y - 7.3xy^2$

Answer: C

278) $4(4 - x) - 8(-2 + 4x)$

A) $-8x + 32$

B) $x + 32$

C) $-36x + 32$

D) $x + 32$

Answer: C

279) $7(6a + 4) - (6a - 2)$

A) $48a + 6$

B) $-36a + 26$

C) $48a + 2$

D) $36a + 30$

Answer: D

Evaluate for the value of the variable(s) indicated.

280) $x^3 + 4x^2y - 4y - 5$ for $x = 3$ and $y = -4$

A) -42

B)

C) -106

D) -538

Answer: C

281) $3x^2 - 7x + 9$ for $x = -4$

A) -67

B) -11

C) 29

D) 85

Answer: D

282) $-3a + 6b$ for $a = \frac{1}{2}$ and $b = -\frac{1}{4}$

A) -3

B) $-\frac{9}{8}$

C) $-\frac{5}{24}$

D) 0

Answer: A

Solve.

283) If you are traveling 57 miles per hour on a highway in Canada, how fast are you traveling in kilometers per hour? (Use $k = 1.61r$, where r = rate in miles per hour and k = rate in kilometers per hour.)

A) 91.8 km/hr

B) 58.6 km/hr

C) 86.1 km/hr

D) 35.4 km/hr

Answer: A

284) A window is in the shape of a trapezoid. The altitude of the window is 54 inches. One base measures 46 inches, and the other base measures 44 inches. What is the area of the window?

A) 109,296 in.²

B) 2430 in.²

C) 4860 in.²

D) 54 in.²

Answer: B

285) Find the total cost of tiling a triangular area having a base length of 3 meters and a height of 9 meters if it costs \$9.71 to tile one square meter. Round to the nearest cent.

A) \$116.52

B) \$262.17

C) \$131.09

D) \$27.00

Answer: C

286) You wish to apply blacktop sealer to your driveway, but do not know how much to buy. If your rectangular driveway measures 30 feet long by 10 feet wide, and a can of blacktop sealer claims to cover 150 square feet, how many cans should you buy?

A) 4 cans

B) 5 cans

C) 3 cans

D) 2 cans

Answer: D

Simplify.

287) $2[a - b(2a + 4b) + 4b^2]$

A) $2a + 8b - 4ab + 8b^2$

B) $2a - 4ab + 16b^2$

C) $2a - 4ab$

D) $2a - 2ab$

Answer: C

288) $2a - \{3b - 6[a - (b - 3a)]\}$

A) $5a - 5b$

B) $26a - 9b$

C) $-22a + 3b$

D) $-10a - 9b$

Answer: B