Basic College Mathematics with Early Integers 3rd Edition Martin Gay Test Bank
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MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Evaluate the expression for the given replacement values.

1) $x - y + z$ for $x = 20, y = 6, z = 1$
A) 13
B) 27
C) 15
D) 16
Answer: C

2) $x - (y + z)$ for $x = 25, y = 6, z = 5$
A) 25
B) 36
C) 24
D) 14
Answer: D

3) $6x + 5$ for $x = 2$
A) 17
B) 7
C) 24
D) 11
Answer: A

4) $\frac{5x}{y}$ for $x = 63, y = 7$
A) 45
B) 35
C) 280
D) 270
Answer: A

5) $\frac{x + y}{6}$ for $x = 24, y = 42$
A) 66
B) 31
C) 11
D) 46
Answer: C

6) $\frac{2x}{8} + \frac{3y}{8}$ for $x = 16, y = 56$
A) 7
B) 11
C) 25
D) 200
Answer: C

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7) $\frac{x}{6} + \frac{y}{6}$ for x = 48, y = 24

A) 32
B) 72
C) 12
D) 52

Answer: C

8) $(x + 3y)^2$ for x = 3, y = 3

A) 36
B) 12
C) 144
D) 24

Answer: C

9) $7x^2 + 4y$ for x = 2, y = 10

A) 236
B) 68
C) 708
D) 560

Answer: B

10) The expression $\frac{9C}{5} + 32$ gives the equivalent degrees Fahrenheit for C degrees Celsius. Evaluate this expression when C = 90 to find the equivalent temperature in degrees Fahrenheit.

A) 194
B) 176
C) 193
D) 212

Answer: A

Write the phrase as a variable expression. Use x to represent "a number."

11) The total of a number and 94

A) x + 94
B) 94x
C) 94
D) 94 – x

Answer: A

12) 4 times a number

A) $\frac{4}{x}$
B) 4 + x
C) 4 – x
D) 4x

Answer: D

13) 6 less than 5 times a number

A) $5x - 6$

B) $5 - 6x$

C) $6x - 5$

D) $6 - 5x$

Answer: A

14) 8 more than 3 times a number

A) $3(8 + x)$

B) $3x + 8$

C) $8x + 3$

D) $11x$

Answer: B

15) 91 less a number

A) 91

B) $x + 91$

C) $91 - x$

D) $91x$

Answer: C

16) The product of 2 and a number

A) $\frac{2}{x}$

B) $2 + x$

C) $2 - x$

D) $2x$

Answer: D

17) 54 subtracted from a number

A) $x - 54$

B) 54

C) $54 - x$

D) $54x$

Answer: A

18) A number divided by 44

A) $44x$

B) $\frac{x}{44}$

C) $\frac{44}{x}$

D) $x - 44$

Answer: B

19) The quotient of 33 and a number

A) 33 – x

B) $\frac{x}{33}$

C) $\frac{33}{x}$

D) x – 33

Answer: C

Represent the quantity by an integer.

20) The bottom of a lake is 255 feet below sea level.

A) +255

B) –255

Answer: B

21) The temperature recorded at the airport was 42° below zero.

A) –42

B) +42

Answer: A

22) Big Ben's Plumbing recorded a profit of $414 last month.

A) –414

B) +414

Answer: B

23) The stock market average experienced a 5–point loss in one day.

A) +5

B) –5

Answer: B

24) The team scored 25 points.

A) –25

B) +25

Answer: B

25) Luke climbed 111 feet down into a subterranean cave.

A) +111

B) –111

Answer: B

26) The price of a gallon of gas rose 16¢ in one day.

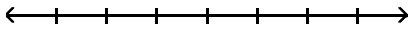
A) +16

B) –16

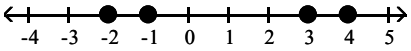
Answer: A

Graph the numbers on the number line.

27) –3, –1, 1, 3



A)



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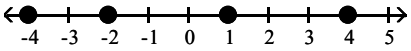

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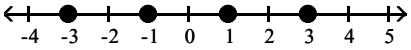

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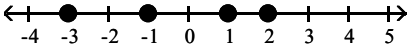
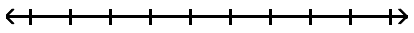
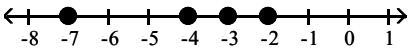


Answer: C

28) –7, –5, –3, –1



A)



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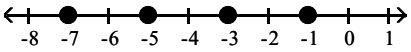

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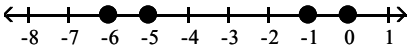

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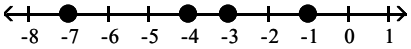


Answer: B

Insert < or > to make the statement true.

29) 8 _____ 6

A) 8 > 6

B) 8 < 6

Answer: A

30) –18 _____ 48

A) –18 > 48

B) –18 < 48

Answer: B

31) –16 _____ –88
A) –16 > –88
B) –16 < –88
Answer: A

32) 5 _____ 0
A) 5 < 0
B) 5 > 0
Answer: B

33) 0 _____ 5
A) 0 > 5
B) 0 < 5
Answer: B

34) –2 _____ 2
A) –2 < 2
B) –2 > 2
Answer: A

35) –5 _____ 0
A) –5 < 0
B) –5 > 0
Answer: A

36) 0 _____ –9
A) 0 > –9
B) 0 < –9
Answer: A

Simplify.

37) |23|
A) 23
B) 46
C) –23
D) 0
Answer: A

38) |–17|
A) –17
B) 17
C) 34
D) 0
Answer: B

39) $|0|$

A) -1
B) 1
C) 0
D) does not exist

Answer: C

40) $|51|$

A) 51
B) 0
C) $\frac{1}{51}$
D) -51

Answer: A

41) $|141|$

A) $\frac{1}{141}$
B) -141
C) 0
D) 141

Answer: D

42) $|-79|$

A) 79
B) $\frac{1}{79}$
C) -79
D) 0

Answer: A

Find the opposite of the integer.

43) 6

A) 6
B) -1
C) -6
D) 0

Answer: C

44) -5

A) 5
B) -1
C) 0
D) -5

Answer: A

45) 15

A) 15
B) –15
C) 1
D) 0

Answer: B

46) –30

A) –1
B) 30
C) –30
D) 0

Answer: B

47) 1

A) 1
B) –1
C) 0
D) does not exist

Answer: B

48) 198

A) –1
B) 0
C) 198
D) –198

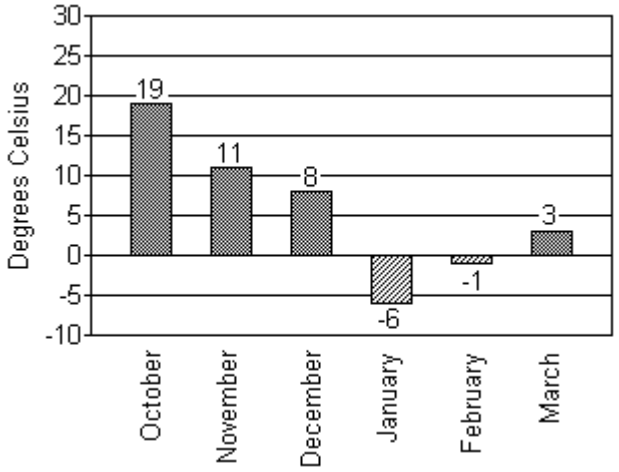
Answer: D

49) –121

A) –121
B) 0
C) 121
D) –1

Answer: C

The bar graph below shows the recorded high temperatures in Little City for the indicated months.



50) In which month was the temperature closest to 0°C?
A) March
B) January
C) February
D) October

Answer: C

51) In which month was the recorded temperature the highest?
A) January
B) October
C) February
D) March

Answer: B

52) In which month was the recorded temperature the second highest?
A) November
B) December
C) October
D) February

Answer: A

53) In which month was the temperature closest to 5°C?
A) December
B) February
C) January
D) March

Answer: D

Simplify.

54) $-|17|$
A) –1
B) 17
C) –17
D) 1

Answer: C

55) $-|97|$

A) -97
B) -96
C) 96
D) 97

Answer: A

56) $-|-15|$

A) 1
B) -15
C) 15
D) -1

Answer: B

57) $-(-14)$

A) 14
B) 0
C) -14
D) -15

Answer: A

Evaluate.

58) $|-x|$ if $x = -3$

A) -3
B) -1
C) 1
D) 3

Answer: D

59) $-|x|$ if $x = 7$

A) 1
B) 7
C) -7
D) -1

Answer: C

60) $-|-x|$ if $x = 6$

A) -1
B) 6
C) -6
D) 1

Answer: C

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

61) $|-2|$ _____ $|-17|$

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

Answer: A

62) |−4| _____ − (−4)
A) >
B) <
C) =
Answer: C

63) −|17| _____ −(−17)
A) >
B) =
C) <
Answer: C

64) 0 _____ −9
A) <
B) >
C) =
Answer: B

65) 0 _____ |−38|
A) =
B) <
C) >
Answer: B

66) −|−20| _____ −|−21|
A) >
B) =
C) <
Answer: A

67) −(−7) _____ −(−19)
A) >
B) <
C) =
Answer: B

68) −2 _____ −(−28)
A) >
B) <
C) =
Answer: B

Fill in the chart.

69)

Number	Absolute Value of Number	Opposite of Number
84		
–80		

A)

Number	Absolute Value of Number	Opposite of Number
84	84	–84
–80	–80	80

B)

Number	Absolute Value of Number	Opposite of Number
84	84	84
–80	80	–80

C)

Number	Absolute Value of Number	Opposite of Number
84	84	–84
–80	80	80

D)

Number	Absolute Value of Number	Opposite of Number
84	–84	–84
–80	80	80

Answer: C

Write the given integers in order from least to greatest.

70) $-(-2)$, 4^2, -10, $-|-6|$, $|-11|$

A) -10, $-|-6|$, $-(-2)$, 4^2, $|-11|$

B) $|-11|$, -10, $-|-6|$, $-(-2)$, 4^2

C) -10, $|-11|$, $-|-6|$, $-(-2)$, 4^2

D) -10, $-|-6|$, $-(-2)$, $|-11|$, 4^2

Answer: D

71) $|-1|$, $-|-3|$, $-(-3)$, $-|1|$

A) $-(-3)$, $-|1|$, $|-1|$, $-|-3|$

B) $-|-3|$, $-|1|$, $|-1|$, $-(-3)$

C) $-(-3)$, $|-1|$, $-|1|$, $-|-3|$

D) $-|-3|$, $|-1|$, $-|1|$, $-(-3)$

Answer: B

72) 3^2, $-|6|$, $-(-12)$, $-|-16|$

A) $-|6|$, $-|-16|$, 3^2, $-(-12)$

B) $-|-16|$, $-|6|$, 3^2, $-(-12)$

C) $-|-16|$, $-(-12)$, $-|6|$, 3^2

D) $-(-12)$, 3^2, $-|6|$, $-|-16|$

Answer: B

Choose all numbers for x from the given list that make the statement true.

73) $|x| > 10$; 0, 10, –8, –12

A) 10, –12

B) –12

C) 0, –8

D) 0, 10, –8

Answer: B

Evaluate.

74) $-(-|-5|)$

A) 5

B) –5

C) –1

D) 1

Answer: A

75) $-(-|-(-9)|)$

A) –1

B) 1

C) 9

D) –9

Answer: C

Determine whether the statement is true or false.

76) If $a > b$, then a must be a positive number.

A) True

B) False

Answer: B

77) The absolute value of a number is always a positive number.

A) True

B) False

Answer: B

78) A positive number is always greater than a negative number.

A) True

B) False

Answer: A

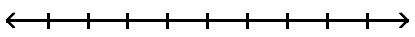
79) Zero is always less than a positive number.
A) True
B) False
Answer: A

80) Zero is always less than a negative number.
A) True
B) False
Answer: B

81) The number –a is always a negative number.
A) True
B) False
Answer: B

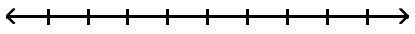
Add the numbers using the number line.

82) 1 + (–2)



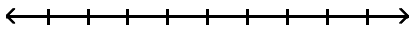
A) –3
B) 3
C) 1
D) –1
Answer: D

83) –2 + 6



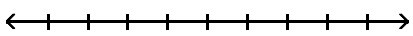
A) 4
B) 8
C) –8
D) –4
Answer: A

84) –9 + 0



A) 0
B) –9
C) 9
D) –90
Answer: B

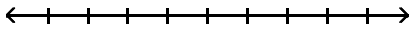
85) –3 + (–7)



A) –4
B) 10
C) 4
D) –10

Answer: D

86) 2 + (–8)



A) –6
B) 10
C) –10
D) 6

Answer: A

Add.

87) 2 + (–4)
A) –2
B) 6
C) 2
D) –6

Answer: A

88) –7 + 8
A) –1
B) 15
C) –15
D) 1

Answer: D

89) 19 + (–85)
A) –104
B) –66
C) 104
D) 66

Answer: B

90) –92 + 14
A) –78
B) –106
C) 78
D) 106

Answer: A

91) –92 + 0
A) –92
B) 0
C) 92
D) –920
Answer: A

92) –92 + (–80)
A) 172
B) –12
C) –172
D) 12
Answer: C

93) 14 + (–14)
A) –14
B) 28
C) 0
D) 14
Answer: C

94) –34 + (–34)
A) –34
B) –68
C) 68
D) 0
Answer: B

95) –130 + (–260)
A) –390
B) –130
C) 130
D) 390
Answer: A

96) –150 + 400
A) 250
B) 550
C) –550
D) –250
Answer: A

97) –69 + 149
A) 218
B) 80
C) –218
D) –80
Answer: B

98) 9 + (−8) + (−19)
A) 36
B) 20
C) −18
D) −2
Answer: C

99) 13 + 21 + (−16)
A) −24
B) 18
C) 50
D) 8
Answer: B

100) −16 + 25 + (−20)
A) 61
B) 21
C) −11
D) 29
Answer: C

101) −2 + (−6) + (−1) + (−21)
A) −24
B) −26
C) −30
D) −14
Answer: C

102) 25 + (−18) + 16 + (−5)
A) −14
B) −4
C) 18
D) 64
Answer: C

103) −18 + (−3) + (−13) + (−6) + 17 + (−17)
A) −32
B) 22
C) −40
D) −74
Answer: C

104) 13 + (−3) + 6 + (−4) + 10 + (−9)
A) −45
B) 1
C) 7
D) 13
Answer: D

Evaluate the expression for the given replacement values.

105) $x + y$ for $x = -26$ and $y = -29$

A) −55
B) 55
C) −3
D) 3

Answer: A

106) $x + y$ for $x = 80$ and $y = -96$

A) 176
B) −176
C) 16
D) −16

Answer: D

107) $2x + y$ for $x = 5$ and $y = -6$

A) 16
B) −1
C) 11
D) 4

Answer: D

108) $2x + y$ for $x = 3$ and $y = -12$

A) 18
B) −9
C) 15
D) −6

Answer: D

Solve.

109) Find the sum of −89 and 14.

A) 103
B) −75
C) 75
D) −103

Answer: B

110) Find the sum of −30 and 10.

A) −40
B) 40
C) 20
D) −20

Answer: D

111) Find the sum of −4, −1, and 23.

A) 28
B) 18
C) 20
D) 26

Answer: B

112) Find the sum of –19, –8, and 22.
A) 33
B) 11
C) 49
D) –5

Answer: D

113) Lauren scored 9 points in her basketball game on Monday, 5 points on Wednesday, 18 points on Friday, and 16 points on Saturday. Find her total points scored for the week.
A) 49 points
B) 48 points
C) 32 points
D) 47 points

Answer: B

114) The Neighborhood Lemonade Stand, Inc. reported net incomes of –$195, –$453, and –$130 for the past three years. What was its total net income for these three years?
A) $778
B) –$648
C) –$778
D) –$583

Answer: C

115) On part of a scenic tour of underground caves, Dave and Neil started at an elevation of – 46 feet. They then rose 17 feet. What was their elevation at this point?
A) –29 ft
B) 29 ft
C) –63 ft
D) 63 ft

Answer: A

116) In four rounds of a card game, you get scores of –6, –1, 4, and –5. What is your final score?
A) 8
B) 4
C) –4
D) –8

Answer: D

117) A bike road race starts at an elevation of 920 feet and passes through 5 stages where the elevation changes by –559 feet, –100 feet, –441 feet, 175 feet, and –139 feet. At what elevation does the race end?
A) 1615 ft
B) 2334 ft
C) –144 ft
D) –2334 ft

Answer: C

118) At the start of a chemistry experiment, Sarah measured the temperature of a liquid to be −11°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) 44°C
B) −44°C
C) 22°C
D) −22°C

Answer: C

119) A deep−sea diver dives from the surface to 66 feet below the surface. She then dives down 10 more feet. Find the diver's depth.
A) −56; 56 ft. below the surface
B) −76; 76 ft. below the surface
C) −79; 79 ft. below the surface
D) −54; 54 ft. below the surface

Answer: B

120) A deep−sea diver dives from the surface to 256 feet below the surface and then swims up 7 feet, down 18 feet, down another 27 feet, and then up 25 feet. Find the diver's depth after these movements.
A) −179; 179 ft below the surface
B) −269; 269 ft below the surface
C) −215; 215 ft below the surface
D) −283; 283 ft below the surface

Answer: B

121) The temperature at 2 p.m. on January 11 was −6° Fahrenheit. By 9 p.m. the temperature had risen 18 degrees. Find the temperature at 9 p.m.
A) −24°F
B) 12°F
C) −12°F
D) 24°F

Answer: B

122) Scores in golf can be positive or negative integers. For example, a score of 6 *over* par can be represented by +6 and a score of 2 *under* par can be represented by −2. If Donna had scores of 3 over par, 7 under par, and 8 under par for three games of golf, what was her total score?
A) 12 over par
B) 18 under par
C) 12 under par
D) 18 over par

Answer: C

123) The difference between a country's exports and imports is called the country's trade balance. If one country had a trade balance of −$92 billion in 1981, $81 billion in 1990, and −$36 billion in 1998. What was the total trade balance for these years?
A) 47 billion dollars
B) 209 billion dollars
C) −47 billion dollars
D) −209 billion dollars

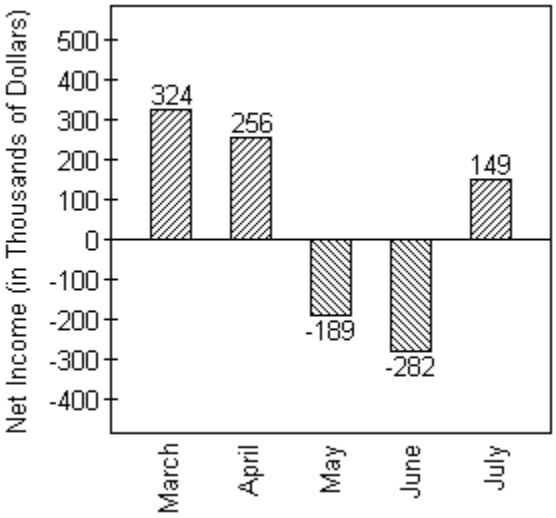
Answer: C

124) Herbert, an African elephant living in a zoo, had been sick and lost a lot of weight. He was down to 9283 pounds. The zoo made a special effort to get food into him. The first month of this effort he gained 115 pounds, the second month he gained another 97 pounds, the third month he had a setback and lost 28 pounds, and the fourth month he gained 103 pounds. What was Herbert's total weight gain or loss in these four months?

A) 9570 pounds
B) gain of 287 pounds
C) gain of 343 pounds
D) gain of 358 pounds

Answer: B

The bar graph below shows the monthly net income for Widgets, LTD.



125) What was the net income (in dollars) for Widgets, LTD in May?

A) $189
B) $189,000
C) –$189
D) –$189,000

Answer: D

126) Find the total net income for months April and May.

A) $67,000
B) $445
C) –$67,000
D) –$445

Answer: A

127) Find the total net income for all months shown.

A) –$40,000
B) $447,000
C) $109,000
D) $258,000

Answer: D

Determine whether the statement is true or false.

128) The sum of two positive numbers is always a positive number.
A) True
B) False
Answer: A

129) The sum of a positive number and a negative number is always a negative number.
A) True
B) False
Answer: B

130) The sum of zero and a positive number is always a positive number.
A) True
B) False
Answer: A

131) The sum of zero and a positive number is always a negative number.
A) True
B) False
Answer: B

Subtract.

132) 9 – 12
A) –3
B) 21
C) –21
D) 3
Answer: A

133) –2 – 9
A) 11
B) –11
C) 7
D) –7
Answer: B

134) –14 – (–8)
A) 6
B) –6
C) –22
D) 22
Answer: B

135) 15 – (–7)
A) 8
B) 22
C) –22
D) –8
Answer: B

136) 17 – 17
A) –17
B) 0
C) 17
D) 34
Answer: B

137) 0 – 8
A) +8
B) –(–8)
C) –8
D) 8
Answer: C

138) –17 – 17
A) 0
B) 34
C) –17
D) –34
Answer: D

139) –17 – (–17)
A) –34
B) 17
C) 0
D) –17
Answer: C

140) 0 – (–8)
A) 8
B) 16
C) –8
D) 0
Answer: A

141) 18 – (–18)
A) –36
B) 36
C) 18
D) 0
Answer: B

142) –180 – 370
A) –190
B) 190
C) –550
D) 550
Answer: C

143) –160 – (–46)
A) 114
B) –206
C) –114
D) 206
Answer: C

Translate the phrase; then simplify.

144) Subtract 31 from –12.
A) –19
B) 19
C) –43
D) 43
Answer: C

145) Find the difference of –32 and –3.
A) –35
B) 29
C) 35
D) –29
Answer: D

Add or subtract as indicated.

146) –27 + (–35)
A) –8
B) –62
C) 8
D) 62
Answer: B

147) 3 – 8
A) 5
B) 11
C) –5
D) –11
Answer: C

148) –2 – 15
A) –13
B) 13
C) –17
D) 17
Answer: C

149) –4 + 16 – (–3)
A) –23
B) –15
C) 15
D) 9
Answer: C

150) 16 – (–6) + (–8)
A) 2
B) 18
C) 14
D) –18
Answer: C

151) 1 + 3 – (–16)
A) 20
B) –18
C) –20
D) –12
Answer: A

152) –14 + 15 – (–17) + 20
A) 4
B) –2
C) –26
D) 38
Answer: D

153) 12 + (–10) – (–6) – 8
A) 0
B) 4
C) 16
D) 24
Answer: A

154) 3 + (–20) – 1 – (–20) + (–14)
A) –50
B) 18
C) –52
D) –12
Answer: D

155) 8 – 0 – (–7) – 20 + (–4)
A) 25
B) 31
C) 17
D) –9
Answer: D

Evaluate the expression for the given replacement values.

156) x – y for x = –29, y = 11
A) 40
B) 18
C) –18
D) –40
Answer: D

157) x – y for x = –11, y = –5
A) –16
B) 6
C) 16
D) –6
Answer: D

158) x – y for x = 14, y = –30
A) 44
B) 16
C) –16
D) –44
Answer: A

159) x – y for x = –6, y = –29
A) –35
B) 23
C) 35
D) –23
Answer: B

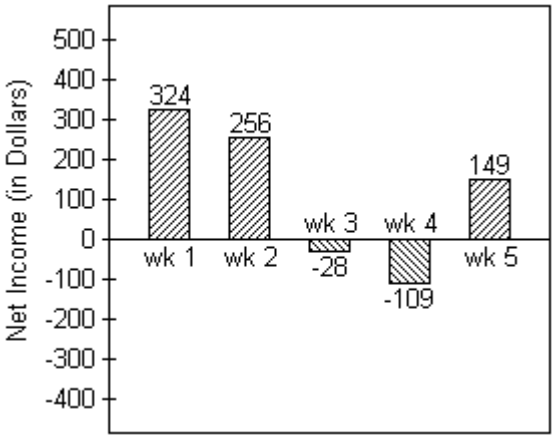
160) x – y for x = 10, y = 19
A) –9
B) –29
C) 29
D) 9
Answer: A

161) 3x – y for x = 5, y = –3
A) 1
B) 12
C) 18
D) 11
Answer: C

162) 3x – y for x = 5, y = –14
A) 1
B) 12
C) 29
D) 22
Answer: C

Solve.

163) Joel has started a business mowing lawns for the summer. The bar graph below tracks his net income for five weeks.



Find the difference in Joel's net income between week 3 and week 4.

A) $137
B) $127
C) $81
D) $71

Answer: C

164) City A has an elevation of 14,251 feet above sea level while city B has an elevation of 18,982 feet below sea level. Find the difference in elevation between those two cities.

A) 4731 ft
B) 33,233 ft
C) 4831 ft
D) 33,333 ft

Answer: B

165) The difference between a country's exports and imports is called the country's trade balance. In 1980, a country had $172 billion in exports and $47 billion in imports. What was the country's trade balance in 1980?

A) 125 billion dollars
B) 219 billion dollars
C) –125 billion dollars
D) –219 billion dollars

Answer: C

166) In a card game, it is possible to have a negative score. If Kayla's score is 11, what is her new score if she loses 38 points?

A) –49 points
B) 49 points
C) 27 points
D) –27 points

Answer: D

167) The temperature at 5:00 was –4°C. Four hours later, it was –15°C. What was the change in temperature?
A) 19°C
B) –19°C
C) 11°C
D) –11°C

Answer: D

168) Trader Tower stands at 2651 feet high. Exchange Emporium is 890 feet tall. How much taller is Trader Tower than Exchange Emporium?
A) 3541 ft
B) –1761 ft
C) –3541 ft
D) 1761 ft

Answer: D

169) Sean has $423 in his savings account. After he withdraws $69, what will his balance be?
A) $354
B) –$492
C) $492
D) –$354

Answer: A

170) The temperature on a March morning is –10°F at 7 a.m. If the temperature drops 2° by 8 a.m., rises 5° by 9 a.m., and then drops 3° by 10 a.m., find the temperature by 10 a.m.
A) 10°F
B) –10°F
C) –20°F
D) 20°F

Answer: B

171) Sara has $228 in her checking account. She writes a check for $26, makes a deposit for $114, and then writes another check for $113. Find the amount left in her account. (Write the amount as an integer.)
A) –25 dollars
B) 203 dollars
C) 25 dollars
D) –203 dollars

Answer: B

172) The price of a stock rose 8 points, fell 13 points, and again fell 9 points. What was the stock's total change?
A) –30 points
B) 4 points
C) 30 points
D) –14 points

Answer: D

173) The highest point at an oil drilling operation is the top of the 73–foot–high oil drilling rig. The lowest point the drill head has reached so far is –211 feet. How far above the drill head is the top of the oil drilling rig?

A) 284 ft
B) -284 ft
C) -211 ft
D) 138 ft

Answer: A

174) Kerry owed $190, borrowed an additional $100, and paid back $55. How much did she still owe?

A) $345
B) – $235
C) $235
D) $145

Answer: C

Simplify.

175) $|-2| - |-7|$

A) 9
B) –5
C) –9
D) 5

Answer: B

176) $|-11| - |-2|$

A) 9
B) 13
C) –13
D) –9

Answer: A

177) $|-19| - |19|$

A) 0
B) 19
C) –38
D) 38

Answer: A

178) $|-14| - |-38|$

A) –52
B) 24
C) –24
D) 52

Answer: C

Determine whether the statement is true or false.

179) $|-11 - 8| = 11 - 8$

A) True
B) False

Answer: B

180) $|-10-(-15)| = |-10| - |-15|$

A) True

B) False

Answer: B

Translate the phrase to an algebraic expression. Use x to represent "a number."

181) Find the sum of 39 and a number.

A) $39 + x$

B) $39 + (-x)$

C) $39 - x$

D) $x - 39$

Answer: A

182) Subtract a number from –10.

A) $x - (-10)$

B) $-10 - x$

C) $-10 + x$

D) $x + (-10)$

Answer: B

183) Find the difference of –36 and a number.

A) $x - (-36)$

B) $-36 - (-x)$

C) $x + (-36)$

D) $-36 - x$

Answer: D

184) The sum of 17 and a number

A) $17 + x$

B) $17 - x$

C) $17x$

D) $-17 + x$

Answer: A

185) The difference of a number and sixteen

A) $x - 16$

B) $\frac{x}{16}$

C) $16x - 16$

D) $16 - x$

Answer: A

186) Subtract a number from 16

A) $16 + x$

B) $16x$

C) $x - (16)$

D) $16 - x$

Answer: D

Multiply.

187) 3(7)

A) 11
B) 18
C) 210
D) 21

Answer: D

188) –9(–7)

A) –63
B) –54
C) 53
D) 63

Answer: D

189) –3(8)

A) 24
B) 14
C) –21
D) –24

Answer: D

190) –6(7)

A) –36
B) –42
C) 36
D) –49

Answer: B

191) –5(9)

A) 40
B) –40
C) –54
D) –45

Answer: D

192) –17(0)

A) –34
B) –17
C) 17
D) 0

Answer: D

193) –10(10)

A) 110
B) 100
C) –100
D) –110

Answer: C

194) 16(–16)
A) –256
B) –272
C) 272
D) 256
Answer: A

195) –11(–11)
A) –132
B) –121
C) 132
D) 121
Answer: D

196) –6(–10)
A) 70
B) 66
C) –66
D) 60
Answer: D

197) –3(–4)(5)
A) –60
B) 160
C) 50
D) 60
Answer: D

198) 8(–3)(–3)
A) –48
B) 82
C) 72
D) –72
Answer: C

199) –4(–5)(3)
A) 60
B) 160
C) –60
D) 50
Answer: A

200) –6(–4)(–5)
A) –20
B) –120
C) –130
D) 120
Answer: B

201) –9(–9)(–9)
A) –739
B) –729
C) –719
D) 729
Answer: B

202) –19(0)(–4)(3)
A) 19
B) 0
C) 1
D) –19
Answer: B

203) 2(–1)(10)(–7)
A) –140
B) 72
C) 140
D) –1
Answer: C

204) –16(12)
A) –204
B) –176
C) 176
D) –192
Answer: D

Evaluate.

205) $(-6)^4$
A) –1296
B) 24
C) 1296
D) –24
Answer: C

206) -3^4
A) –81
B) 81
C) –12
D) 12
Answer: A

207) $(-1)^{16}$
A) –1
B) 1
C) –16
D) 16
Answer: B

208) $(-1)^7$

A) –7
B) 7
C) 1
D) –1

Answer: D

209) $(-4)^3$

A) 4
B) 64
C) –16
D) –64

Answer: D

210) -6^5

A) 216
B) 7776
C) –1296
D) –7776

Answer: D

Translate the phrase; then simplify.

211) Find the product of –3 and –11.

A) 33
B) –30
C) –33
D) 30

Answer: A

212) Find the product of –4 and 20.

A) 76
B) –80
C) –76
D) 80

Answer: B

Translate the phrase to an algebraic expression. Use x to represent "a number."

213) The product of 19 and a number

A) $-19 \cdot x$ or $-19x$
B) $19 \div x$ or $\frac{19}{x}$
C) $19 \cdot x$ or $19x$
D) $19 + x$

Answer: C

214) The product of –20 and a number

A) $x \div (-20)$ or $\frac{x}{-20}$

B) $-20 - x$

C) $-20 + x$

D) $-20 \cdot x$ or $-20x$

Answer: D

215) Multiply a number by –7.

A) $x \div (-7)$ or $\frac{x}{-7}$

B) $x \cdot (-7)$ or $-7x$

C) $(-7) \div x$ or $\frac{-7}{x}$

D) $-7 + x$

Answer: B

Find the quotient.

216) $-40 \div 8$

A) –6

B) –5

C) 5

D) –4

Answer: B

217) $14 \div (-2)$

A) 7

B) –8

C) 8

D) –7

Answer: D

218) $-27 \div (-9)$

A) –4

B) 4

C) 3

D) –3

Answer: C

219) $\frac{-24}{8}$

A) –2

B) 3

C) –3

D) –4

Answer: C

220) $\frac{40}{-8}$

A) −4
B) 5
C) −5
D) −6

Answer: C

221) $\frac{-36}{-6}$

A) −6
B) −5
C) 6
D) −7

Answer: C

222) $\frac{-32}{-8}$

A) −4
B) −24
C) 24
D) 4

Answer: D

223) $\frac{-175}{7}$

A) −25
B) −35
C) $-\frac{1}{25}$
D) 25

Answer: A

224) $\frac{135}{-9}$

A) −15
B) 15
C) $-\frac{1}{15}$
D) −25

Answer: A

225) $-40 \div (-4)$

A) $\frac{1}{10}$
B) 10
C) −10
D) 0

Answer: B

226) $-720 \div 90$

A) 8

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

C) -8

D) -18

Answer: C

227) $316 \div (-79)$

A) -14

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

C) -4

D) 4

Answer: C

228) $\frac{-225}{-9}$

A) $\frac{1}{25}$

B) 15

C) -25

D) 25

Answer: D

229) $\frac{-80}{0}$

A) 0

B) 1

C) 80

D) undefined

Answer: D

230) $\frac{0}{80}$

A) -80

B) 1

C) 0

D) undefined

Answer: C

231) $\frac{11}{0}$

A) 1

B) 0

C) 11

D) undefined

Answer: D

232) $-\frac{36}{9}$

A) 4
B) –4
C) –27
D) 27

Answer: B

233) –184 ÷ 8

A) 23
B) –23
C) $-\frac{1}{23}$
D) –33

Answer: B

Translate the phrase; then simplify.

234) Find the quotient of –24 and 3.

A) –9
B) –8
C) 8
D) –7

Answer: B

235) Find the quotient of –16 and –2.

A) –8
B) 8
C) 9
D) –9

Answer: B

Translate the phrase to an algebraic expression. Use x to represent "a number."

236) A number divided by –7

A) $-7 \div x$ or $\frac{-7}{x}$
B) x – (–7)
C) $x \div -7$ or $\frac{x}{-7}$
D) $-7 \cdot x$ or –7x

Answer: C

237) Find the quotient of –15 and a number

A) $x \div -15$ or $\frac{x}{-15}$
B) $-15 \cdot x$ or –15 x
C) –15 – x
D) $-15 \div x$ or $\frac{-15}{x}$

Answer: D

238) Divide a number by –63.

A) $-63 \cdot x$ or $-63x$

B) $x - (-63)$

C) $-63 \div x$ or $\frac{-63}{x}$

D) $x \div (-63)$ or $\frac{x}{-63}$

Answer: D

Evaluate the expression for the given replacement values.

239) xy for $x = -8$, $y = -9$

A) –72

B) –17

C) 72

D) 1

Answer: C

240) xy for $x = 0$, $y = -29$

A) –29

B) 29

C) 0

D) undefined

Answer: C

241) $\frac{x}{y}$ for $x = -20$, $y = -2$

A) 10

B) –22

C) –10

D) 22

Answer: A

242) $\frac{x}{y}$ for $x = 0$, $y = -34$

A) 34

B) –34

C) 0

D) undefined

Answer: C

243) $\frac{x}{y}$ for $x = -16$, $y = 0$

A) 16

B) –16

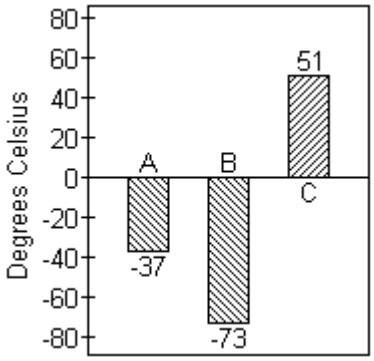
C) 0

D) undefined

Answer: D

Solve.

244) The graph shows the melting points in degrees Celsius of three compounds: Compound A, Compound B and Compound C.



The melting point of Compound D is –11 times the melting point of Compound B. Find the melting point of Compound D.

A) 793°C
B) 803°C
C) –803°C
D) 813°C

Answer: B

245) Ben lost $396 on each of 4 consecutive days in the stock market. If he had $14,901 before his loss, how much does he have after his loss?

A) $16,485
B) $14,505
C) $13,317
D) $1584

Answer: C

246) A weather forecaster predicts that the temperature will drop 6 degrees each hour for the next 8 hours. If the temperature is 36 degrees before the temperature starts falling, what is the temperature after the drop?

A) 48°
B) 22°
C) –48°
D) –12°

Answer: D

247) In 1995, Little City Productions produced and sold 3363 thousand of its Little City Collectible Bears. In 2002, the number of these bears produced and sold had dropped to 465 thousand. Find the change in the number of bears produced from 1995 to 2002, and find the average change per year in the number of bears produced over this period.

A) change: 2898 thousand bears
average change: 414 thousand bears
B) change: –2898 thousand bears
average change: –414 thousand bears
C) change: –2898 thousand bears
average change: 414 thousand bears
D) change: 2898 thousand bears
average change: –414 thousand bears

Answer: B

248) A football team lost 6 yards on each of two consecutive plays. Represent the total loss as product of signed numbers and find the total loss.
A) 2 + (−6) = −4 yds; 4 yard loss
B) 6 − 2 = 4 yds; 4 yard loss
C) 2 · (−6) = −14 yds; 14 yard loss
D) 2 · (−6) = −12 yds; 12 yard loss

Answer: D

249) A checking account had a beginning balance of $1414. A deposit was made in the amount of $1508. Every month for 13 months $75 was withdrawn. How much money was left in the account at the end of the 13 months?
A) $975
B) $2847
C) $1947
D) $533

Answer: C

Let a and b be positive numbers. Determine whether the statement is true or false.

250) a(−b) is a negative number.
A) True
B) False

Answer: A

251) a(−b) is a positive number.
A) True
B) False

Answer: B

252) (−a)(−b) is a negative number.
A) True
B) False

Answer: B

253) (−a)(−b) is a positive number.
A) True
B) False

Answer: A

254) (−a)(−a) is a positive number.
A) True
B) False

Answer: A

255) (−a)(−a) is a negative number.
A) True
B) False

Answer: B

256) (–a)(–a)(–a) is a positive number.
A) True
B) False
Answer: B

257) (–a)(–a)(–a) is a negative number.
A) True
B) False
Answer: A

Without actually finding the product, write the list of numbers in order from least to greatest.

258) $(-4)^{16}$, $(-4)^{17}$, $(-7)^{16}$, $(-7)^{17}$
A) $(-7)^{17}$, $(-4)^{17}$, $(-4)^{16}$, $(-7)^{16}$
B) $(-7)^{16}$, $(-4)^{16}$, $(-4)^{17}$, $(-7)^{17}$
C) $(-4)^{16}$, $(-4)^{17}$, $(-7)^{16}$, $(-7)^{17}$
D) $(-4)^{16}$, $(-7)^{16}$, $(-4)^{17}$, $(-7)^{17}$
Answer: A

259) $(-1)^{50}$, $(-1)^{65}$, 0^{17}, $(-7)^{22}$, $(-7)^{27}$
A) $(-7)^{27}$, $(-7)^{22}$, $(-1)^{65}$, $(-1)^{50}$, 0^{17}
B) 0^{17}, $(-1)^{50}$, $(-1)^{65}$, $(-7)^{22}$, $(-7)^{27}$
C) $(-1)^{65}$, $(-7)^{27}$, 0^{17}, $(-1)^{50}$, $(-7)^{22}$
D) $(-7)^{27}$, $(-1)^{65}$, 0^{17}, $(-1)^{50}$, $(-7)^{22}$
Answer: D

Simplify.

260) -2^4
A) –16
B) –8
C) 16
D) 2
Answer: A

261) $(-2)^4$
A) –8
B) 2
C) 16
D) –16
Answer: C

262) $-(-5)^3$
A) 125
B) –2
C) –15
D) –125
Answer: A

263) $3 + 3(2 - 4)$

A) 9
B) –3
C) 3
D) –9

Answer: B

264) $5(-2)(7 - 5) - 8$

A) –12
B) 12
C) –18
D) –28

Answer: D

265) $80 \div (-8) - 11$

A) 21
B) 9
C) –21
D) –9

Answer: C

266) $7^2 - 6(2)$

A) 49
B) 37
C) –61
D) 2

Answer: B

267) $7 \cdot 4^2$

A) 42
B) 784
C) 56
D) 112

Answer: D

268) $6 - 2 \cdot 5$

A) 20
B) –4
C) 16
D) 4

Answer: B

269) $-5 + 6 \cdot 3$

A) 13
B) –3
C) 23
D) –13

Answer: A

270) $-14 + 40 \div (-4)$

A) -24
B) -6
C) 6
D) 24

Answer: A

271) $10 - 5 + 11$

A) -6
B) -550
C) -45
D) 16

Answer: D

272) $-8 + 7 \cdot 10 - 3$

A) 59
B) 6
C) -7
D) -13

Answer: A

273) $8 + 8 \cdot 5 - 10$

A) 38
B) -32
C) 70
D) 28

Answer: A

274) $4 - (-9)^2$

A) 89
B) 85
C) -73
D) -77

Answer: D

275) $\frac{20 - 8}{-1}$

A) 11
B) 12
C) -12
D) 28

Answer: C

276) $\frac{-38 - 133}{-19}$

A) -19
B) -5
C) -9
D) 9

Answer: D

277) $\frac{-15}{1+4}$

A) 5
B) 3
C) $\frac{-15}{1-4}$
D) –3

Answer: D

278) $\frac{-7}{-4-3}$

A) 7
B) 1
C) –7
D) –1

Answer: B

279) 8(–5) – (–17)

A) 96
B) –176
C) –23
D) –57

Answer: C

280) $-13 + 3^3$

A) 40
B) –40
C) –1000
D) 14

Answer: D

281) $[7 + (-3)]^3$

A) 1000
B) 370
C) 316
D) 64

Answer: D

282) $6 \cdot 4 - 3 \cdot 5 + (-20)$

A) 11
B) 29
C) 19
D) –11

Answer: D

283) $14 - (-6)^2$

A) 22
B) 50
C) –22
D) 26

Answer: C

284) $|-3 + 6| \cdot 9^2$

A) –243
B) 84
C) 243
D) 729

Answer: C

285) $(-9)^2 + (-3)^2 - 6$

A) –138
B) –84
C) 138
D) 84

Answer: D

286) $(-9)(7)^3 - (-9)(-8)$

A) –3159
B) –3087
C) –3015
D) 72

Answer: A

287) $|8 - 18| \cdot (-8) \div (-4)$

A) –20
B) 320
C) 20
D) –320

Answer: C

288) $(6 - 9)^2 \div (3 - 2)^3$

A) 9
B) 6
C) –9
D) –6

Answer: A

289) $(-4 + 22) \div 6 - 15$

A) 12
B) 18
C) –18
D) –12

Answer: D

290) $-11(4 - 5) - 3^4$

A) 92
B) –70
C) –1
D) 81

Answer: B

291) $(13 + 21) \cdot (27 - 22)$

A) 83
B) 39
C) 896
D) 170

Answer: D

292) $(-42 \div 7) - (6 \div 6)$

A) 5
B) –7
C) –6
D) 6

Answer: B

293) $-1^2 - 2^2$

A) –6
B) –5
C) 6
D) 5

Answer: B

294) $(-1)^2 - 2^2$

A) 3
B) 5
C) –6
D) –3

Answer: D

295) $(9 - 7^2)^2$

A) –10
B) 25
C) 1600
D) –1600

Answer: C

296) $3(4 - 6)^2 + 2(4 - 7)^2$

A) 6
B) –6
C) 30
D) –30

Answer: C

297) $24 - [6 - (2 - 10)] + (5 - 7)^3$

A) –18
B) 34
C) 18
D) 2

Answer: D

298) $4[-4 + 5(-4 + 2)]$

A) –56
B) –8
C) –12
D) –26

Answer: A

299) $-13 + (5 \cdot 2 + 40) \div 5$

A) 5
B) 3
C) –3
D) –1

Answer: C

300) $\frac{[-15 \div (-3) - 1]}{[1 - (-1)]}$

A) –2
B) 2
C) 1
D) undefined

Answer: B

301) $\frac{[2^2 + 4(-5)]}{[4 + (-12)]}$

A) 2
B) 1
C) –2
D) 3

Answer: A

302) $\frac{[7 - 5(-1)]}{[11 - (15)]}$

A) –4
B) –3
C) 3
D) –12

Answer: B

303) $\frac{7(-3) - 4 + 8}{-85 \div 5}$

A) $\frac{1}{5}$

B) – 1
C) 5
D) 1

Answer: D

304) $\frac{16(-1) - (-8)(-5)}{2[-12 \div (-3 - 3)]}$

A) 14
B) –6
C) –14
D) undefined

Answer: C

305) $\frac{7 - (-7)}{82 + 2(14 - 7) - 9^2 - 8}$

A) 14
B) 2
C) 7
D) 0

Answer: B

306) $[2 \div (7 - 5) + 6^2] - [5 - (-1)]^2$

A) 1
B) 13
C) 61
D) 11

Answer: A

Evaluate the expression for x = –2, y = 3, z = –4.

307) $-2z^2$

A) 64
B) 32
C) –32
D) 16

Answer: C

308) $2 - z^2$

A) 10
B) 18
C) –14
D) 16

Answer: C

309) $6x - y^2$

A) –21
B) 6
C) –3
D) –18

Answer: A

310) $\frac{9z}{x}$

A) –38
B) 7
C) 18
D) –18

Answer: C

311) $7x - 3y - 9z$

A) –19
B) –29
C) 63
D) 13

Answer: D

Find the average of the list of numbers.

312) –10, 3, –8, 9, –2, 4, 11

A) –2
B) –3
C) 1
D) –1

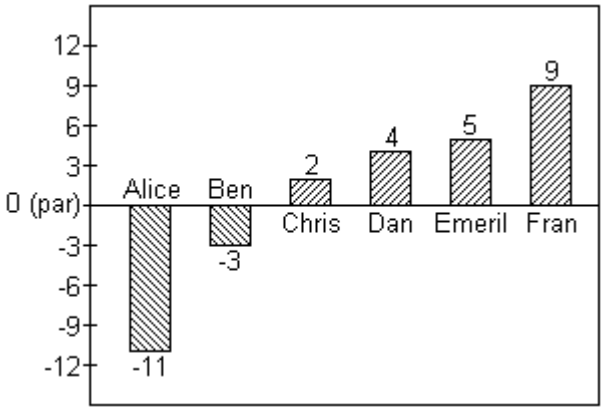
Answer: C

313) –13, –7, –3, –4, 0, –9

A) –7
B) –4
C) –6
D) –5

Answer: C

Scores in golf can be 0 (also called par), a positive integer (also called above par) or a negative integer (also called below par). Below are the scores of some members of a college golf team in a recent tournament.



314) Find the average of the scores for Alice, Ben and Chris.

A) –4
B) –3
C) –12
D) 4

Answer: A

315) Find the average of the scores of the members shown.

A) 0
B) 2
C) –1
D) 1

Answer: D

Insert parentheses where needed so that the expression evaluates to the given number.

316) $3 \cdot 8 - 4 \cdot 5$; evaluates to –36

A) $3 \cdot (8 - 4) \cdot 5$
B) $(3 \cdot 8) - (4 \cdot 5)$
C) $(3 \cdot 8 - 4) \cdot 5$
D) $3 \cdot (8 - 4 \cdot 5)$

Answer: D

317) $5 \cdot 18 \div 3 - 9$; evaluates to 21

A) $5 \cdot (18 \div 3) - 9$
B) $(5 \cdot 18) \div (3 - 9)$
C) $5 \cdot 18 \div (3 - 9)$
D) $5 \cdot (18 \div 3 - 9)$

Answer: A

Evaluate.

318) $(-15)^5$

A) 50,625
B) 759,375
C) –759,375
D) –50,625

Answer: C

319) $5(xy + 3)^x$ for $x = 3$ and $y = -3$

A) −1080
B) 180
C) 1080
D) −216

Answer: A

320) $(-5z)(-4x - 2y)$ for $x = -2$, $y = 3$, and $z = -4$

A) −160
B) −40
C) 40
D) −280

Answer: C

Fill in the blank with one of the words or phrases listed below.

signed	**positive**	**opposites**	**negative**
absolute value	**variable**	**integers**	

321) Two numbers that are the same distance from 0 on the number line but are on opposite sides of 0 are called _____.

A) negative
B) opposites
C) integers
D) signed

Answer: B

322) Together, positive and negative numbers, and 0 are called _____ numbers.

A) positive
B) absolute value
C) negative
D) signed

Answer: D

323) The _____ of a number is that number's distance from 0 on the number line.

A) variable
B) positive
C) negative
D) absolute value

Answer: D

324) The _____ are . . ., −3, −2, −1, 0, 1, 2, 3, ...

A) positives
B) opposites
C) integers
D) negatives

Answer: C

325) A letter used to represent a number is called a(n) _____.

A) variable
B) negative
C) absolute value
D) positive

Answer: A

326) The _____ numbers are numbers less than zero.

A) positive
B) negative
C) absolute value
D) signed

Answer: B

327) The _____ numbers are numbers greater than zero.

A) absolute value
B) negative
C) signed
D) positive

Answer: D

Simplify the expression.

328) $-6 + 2$

A) 4
B) 8
C) −4
D) −8

Answer: C

329) $1 - 5$

A) −4
B) 6
C) −6
D) 4

Answer: A

330) $12 \cdot (-20)$

A) 220
B) −240
C) −220
D) −252

Answer: B

331) $(-24) \div (-4)$

A) −6
B) −7
C) 7
D) 6

Answer: D

332) (–13) + (–1)
A) –12
B) 12
C) 14
D) –14
Answer: D

333) –14 – (–12)
A) –2
B) 26
C) –26
D) 2
Answer: A

334) (–17) · (–5)
A) 102
B) 85
C) 90
D) –102
Answer: B

335) $\frac{-32}{-4}$
A) –9
B) –8
C) –7
D) 8
Answer: D

336) |–35| + (–13)
A) –22
B) 22
C) 48
D) –48
Answer: B

337) 11 – |–31|
A) –42
B) 42
C) –20
D) 20
Answer: C

338) |7| · |–3|
A) –14
B) 14
C) 21
D) –21
Answer: C

339) $\frac{|-24|}{-|-4|}$

A) –5
B) –6
C) 6
D) –7

Answer: B

340) (–18) + 120 ÷ (–6)

A) 38
B) –17
C) –38
D) 17

Answer: C

341) –7 + (–31) – 15 + 7

A) –46
B) –60
C) 16
D) –32

Answer: A

342) $(-5)^3$ – 35 ÷ (–5)

A) –118
B) –132
C) 118
D) 132

Answer: A

343) $(2 - 5)^2 \cdot (7 - 5)^3$

A) –72
B) –298
C) 36
D) 72

Answer: D

344) $-(-9)^2 \div 9 \cdot (-6)$

A) 486
B) –54
C) –486
D) 54

Answer: D

345) $9 - (5 - 3)^3$

A) 5
B) 17
C) 1
D) 13

Answer: C

346) $-10 + 70 \div (-7)$

A) -9
B) -20
C) 9
D) 20

Answer: B

347) $\frac{24}{6} - \frac{4^2}{4}$

A) -4
B) 0
C) 12
D) 8

Answer: B

348) $\frac{-6(-5) + 5}{-1(-2 - 3)}$

A) 5
B) -7
C) 7
D) 35

Answer: C

349) $\frac{|22 - 29|^2}{2(-8) + 9}$

A) 7
B) -8
C) 8
D) -7

Answer: D

350) $22 - [5 - (5 - 9)] + (4 - 6)^3$

A) 29
B) 21
C) -21
D) 5

Answer: D

351) $-2^2 - 3^2$

A) -10
B) 10
C) 13
D) -13

Answer: D

Evaluate the expression for the given replacement values.

352) $4x + y$ for $x = -5, y = 5$

A) 10
B) −15
C) 0
D) 25

Answer: B

353) $|x| + |y| + |z|$ for $x = -18, y = 11, z = -5$

A) −12
B) 34
C) 12
D) −24

Answer: B

354) $\frac{2z}{5y}$ for $y = 2, z = -5$

A) −1
B) 25
C) 1
D) −4

Answer: A

355) $5y^2$ for $y = 4$

A) 40
B) 80
C) 400
D) 30

Answer: B

356) $14 - y^2$ for $y = -6$

A) 50
B) 26
C) 22
D) −22

Answer: D

357) $9x + 5y - 10z$ for $x = 7, y = -5, z = -2$

A) 18
B) 68
C) 58
D) −18

Answer: C

Solve.

358) A diver starts at sea level and then makes 3 successive descents of 25 feet. After the descents, what is her elevation?

A) 22 feet below sea level
B) 75 feet below sea level
C) 28 feet below sea level
D) 50 feet below sea level

Answer: B

359) Drew has $144 in his checking account. He writes a check for $63, withdraws $20 from an ATM, and then deposits $23. Represent the new balance in his account by an integer.

A) $210
B) $84
C) $124
D) $78

Answer: B

360) A mountain in the Great Smoky Mountains National Park has an elevation of 5507 feet above sea level. A gap in the Atlantic Ocean has an elevation of 24,502 feet below sea level. Represent the difference in elevation between these two points by an integer.

A) 30,009 ft
B) 13,488 ft
C) 35,516 ft
D) 18,995 ft

Answer: A

361) Big Bear Lake has a maximum depth of 3198 feet. The elevation of the lake's surface is 1224 feet above sea level. What is the elevation (with respect to sea level) of the deepest point in the lake?

A) 5172 feet below sea level
B) 3198 feet below sea level
C) 1974 feet below sea level
D) 4422 feet below sea level

Answer: C

Find the average of the list of numbers.

362) –12, 7, –3, 2, 9, –4, –13

A) 1
B) –3
C) –2
D) –1

Answer: C

Translate the phrase to an algebraic expression. Use x to represent "a number."

363) a. The product of a number and 18
b. Twice a number subtracted from 12

A) a. 18x
b. 12 – 2x

B) a. $\frac{18}{x}$
b. 12 – 2x

C) a. $\frac{18}{x}$
b. 2x – 12

D) a. 18x
b. 2x – 12

Answer: A

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