Test Bank for Prealgebra and Introductory Algebra 4th Bittinger

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

Use an integer to express the number.

1) The stock market lost 43 points on Monday.
A) 43 B) –43
Answer: B

2) During one year, 26 employees started work at Newline Manufacturing Company.
A) –26 B) 26
Answer: B

3) A football team gained 29 yards on one play.
A) –29 B) 29
Answer: B

4) In one state, the lowest point is 104 feet below sea level.
A) 104 B) –104
Answer: B

5) One country exported $75,400,000 more than it imported, giving it a positive trade balance.
A) –75,400,000 B) 75,400,000
Answer: B

6) Sales at Andrea's Formal Wear Shop were $1891 less this week than the sales last week.
A) 1891 B) –1891
Answer: B

7) Mr. Voss increased his speed by 20 miles per hour.
A) –20 B) 20
Answer: B

8) On a sunny day, the water temperature in the swimming pool rises 3 degrees.
A) 3 B) –3
Answer: A

9) This year corn production decreased 9,000 pounds from last year on Steve's farm.
A) –9,000 B) 9,000
Answer: A

Write < or > between the pair of numbers to make the statement true.

10) 6 □ 7
A) < B) >
Answer: A

11) 10 □ 9
A) < B) >
Answer: B

12) –10 □ 4
A) < B) >
Answer: A

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13) 5 □ –2
A) < B) >
Answer: B

14) –9 □ –5
A) < B) >
Answer: A

15) 0 □ 6
A) < B) >
Answer: A

16) 0 □ –5
A) < B) >
Answer: B

17) 8 □ 0
A) < B) >
Answer: B

18) –2 □ 0
A) < B) >
Answer: A

Find the absolute value.

19) $|4|$
A) 1 B) 0 C) –4 D) 4
Answer: D

20) $|-8|$
A) –8 B) 8 C) 1 D) 0
Answer: B

21) $|917|$
A) 917 B) 1 C) 0 D) –917
Answer: A

22) $|-544|$
A) 1 B) 0 C) 544 D) –544
Answer: C

23) $|7241|$
A) –7241 B) 7241 C) 0 D) 1
Answer: B

24) $|-7217|$
A) 7217 B) 0 C) –7217 D) 1
Answer: A

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25) $|0|$

A) –1 B) 0 C) 1 D) $\frac{1}{0}$

Answer: B

Find the following.

26) Find –x when x is 4.

A) –5 B) 4 C) –4 D) 0

Answer: C

27) Find –x when x is –27.

A) –27 B) 27 C) 0 D) $-\frac{1}{27}$

Answer: B

28) Find –x when x is 0.

A) –7 B) –1 C) 1 D) 0

Answer: D

29) Find –(–x) when x is 42.

A) 0 B) $\frac{1}{42}$ C) –42 D) 42

Answer: D

30) Find –(–x) when x is 125.

A) $\frac{1}{125}$ B) –125 C) 125 D) 0

Answer: C

31) Find –(–x) when x is –64.

A) $-\frac{1}{64}$ B) –64 C) 64 D) 0

Answer: B

32) Find –(–x) when x is –70.

A) 70 B) –70 C) –71 D) 140

Answer: B

Change the sign. (Find the opposite, or additive inverse.)

33) 3

A) 3 B) –3 C) $\frac{1}{3}$ D) $\frac{-1}{3}$

Answer: B

34) –9

A) $\frac{1}{9}$ B) 9 C) –9 D) $\frac{-1}{9}$

Answer: B

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35) 0

A) $\frac{1}{0}$ B) 0 C) 1 D) –1

Answer: B

Evaluate –|–x| given x.

36) 43

A) –43 B) –23 C) 23 D) 43

Answer: A

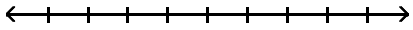
37) –93

A) 93 B) 58 C) –93 D) –58

Answer: C

Add the numbers using the number line.

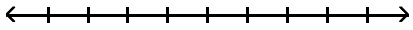
38) 4 + (–1)



A) –3 B) –5 C) 5 D) 3

Answer: D

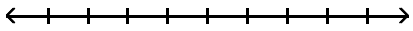
39) –1 + 6



A) –5 B) 7 C) 5 D) –7

Answer: C

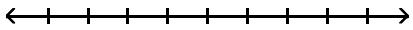
40) 98 + (–95)



A) 193 B) –193 C) –3 D) 3

Answer: D

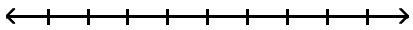
41) –91 + 93



A) –2 B) 184 C) 2 D) –184

Answer: C

42) –4 + 0



A) 0 B) –4 C) 4 D) –40

Answer: B

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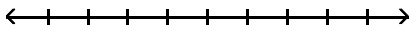
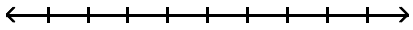
43) –7 + (–5)



A) –12 B) 2 C) –2 D) 12

Answer: A

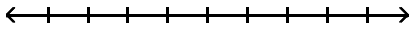
44) –7 + (8)



A) –1 B) 1 C) 15 D) –15

Answer: B

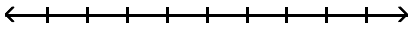
45) –9 + (10)



A) –19 B) 1 C) 19 D) –1

Answer: B

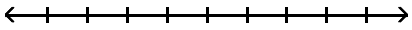
46) 10 + (–10)



A) 0 B) –10 C) 10 D) 20

Answer: A

47) –8 + 8



A) 16 B) 8 C) 0 D) –8

Answer: C

Add. Use a number line only as a check.

48) 3 + (–4)

A) –1 B) 7 C) 1 D) –7

Answer: A

49) –5 + 9

A) –4 B) 4 C) –14 D) 14

Answer: B

50) 6 + (–73)

A) –67 B) 67 C) –79 D) 79

Answer: A

51) –18 + 14

A) 4 B) –4 C) 32 D) –32

Answer: B

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52) –30 + 0
A) 0 B) –30 C) 30 D) –300
Answer: B

53) –69 + (–83)
A) 152 B) –152 C) 14 D) –14
Answer: B

54) –99 + (41)
A) 58 B) –140 C) –58 D) 140
Answer: C

55) –13 + 13
A) 26 B) 1 C) 0 D) –26
Answer: C

56) 20 + (–20)
A) 0 B) 40 C) –40 D) 1
Answer: A

Add.

57) 10 + (–13) + (–16)
A) 7 B) 13 C) 39 D) –19
Answer: D

58) 14 + 19 + (–13)
A) 8 B) 20 C) –18 D) 46
Answer: B

59) –8 + 4 + (–14)
A) 26 B) –2 C) –18 D) 10
Answer: C

60) –4 + (–19) + (–1) + (–24)
A) –40 B) –38 C) –2 D) –48
Answer: D

61) 8 + (–20) + 5 + (–6)
A) 39 B) –23 C) –11 D) –13
Answer: D

62) –20 + (–5) + (–15) + (–15) + 19 + (–20)
A) –44 B) –56 C) 14 D) –94
Answer: B

63) 18 + (–11) + 13 + (–16) + 2 + (–9)
A) –7 B) –69 C) –3 D) –29
Answer: C

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64) –15 + (–36) + 27 + (–32)

A) –110 B) 8 C) –26 D) –56

Answer: D

65) 318 + (–51) + 41 + (–197) + (–52) + 211

A) –870 B) 374 C) –270 D) 270

Answer: D

Subtract.

66) 0 – 23

A) –23 B) $\frac{1}{23}$ C) 0 D) 23

Answer: A

67) 14 – 20

A) –6 B) 6 C) 34 D) –34

Answer: A

68) –16 – 15

A) –31 B) –1 C) 1 D) 31

Answer: A

69) 2 – (–22)

A) 20 B) –24 C) –20 D) 24

Answer: D

70) –7 – (–20)

A) –13 B) –7 C) 13 D) –27

Answer: C

71) –16 – (–10)

A) –26 B) –6 C) 26 D) 6

Answer: B

72) 28 – (–59)

A) 31 B) –31 C) 87 D) –87

Answer: C

73) –8 – (–8)

A) 0 B) 16 C) –8 D) –16

Answer: A

74) –622 – (–84)

A) –538 B) 706 C) 538 D) –706

Answer: A

75) 10 – 10

A) 0 B) 20 C) –10 D) –20

Answer: A

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Simplify.

76) $6 + (-7) - (-17)$

A) 16 B) −4 C) −16 D) −18

Answer: A

77) $-3 - 15 + 14$

A) −4 B) −2 C) 26 D) 2

Answer: A

78) $16 + 2 - (-4)$

A) 22 B) 10 C) 14 D) −22

Answer: A

79) $-9 + 11 - (-4) + 16$

A) 14 B) −10 C) −8 D) 22

Answer: D

80) $-5 + 14 - (-16) - 2$

A) 23 B) 27 C) −33 D) −5

Answer: A

81) $-2 + 8 - (-4) - 9 + (-9)$

A) 2 B) 4 C) 10 D) −8

Answer: D

82) $7 - 0 - (-1) - 14 + (-11)$

A) −17 B) 31 C) 9 D) 11

Answer: A

83) $14 + (-69) - 27 - (-80) + (-62)$

A) −224 B) −64 C) −100 D) 60

Answer: B

Solve the problem.

84) The stock market gained 51 points on Tuesday and lost 15 points on Wednesday. It had closed on Monday at 2714 points. Where did the market close on Wednesday?

A) 2780 points B) 2678 points C) 2648 points D) 2750 points

Answer: D

85) During one year 14 new employees began work at Daniel's Manufacturing Company and 30 employees left. At the beginning of the year there were 257 employees. What was the number of employees at the end of the year?

A) 213 employees B) 241 employees C) 301 employees D) 271 employees

Answer: B

86) A football team gained 36 yards on one play, lost 38 yards on another, and gained 21 yards on the last play of the first half. They had already gained 353 yards during the half. What was the total yardage gain for the first half?

A) 372 yards B) 334 yards C) 410 yards D) 448 yards

Answer: A

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87) In four rounds of a card game, you get scores of 3, 5, –7, and 4. What is your final score?
A) –19 B) 19 C) 5 D) –5
Answer: C

88) Your bank account has $53 in it when you write checks for $10, $13, and $43. You then deposit $23 and $18. How much is in the account? Are you overdrawn?
A) –$78, yes B) $71, no C) $28, no D) $78, no
Answer: C

89) A bike road race starts at an elevation of 780 feet and passes through 5 stages where the elevation changes by 292 feet, 113 feet, –36 feet, –300 feet, and –485 feet. At what elevation does the race end?
A) –2006 feet B) 2006 feet C) –410 feet D) 364 feet
Answer: D

90) A corporation's bank account has $7363 in it when the treasurer writes checks for $509, $4140, and $3551. Then deposits of $729 and $2111 are made. How much is in the account? Is it overdrawn?
A) $5554, no B) –$12,723, yes C) $12,723, no D) $2003, no
Answer: D

91) Nikki is fishing from a bank 33 feet above water level. In this location, the fish tend to feed at 45 feet below the surface. How long must Nikki's fish line be to reach the fish?
A) –12 feet B) 78 feet C) –33 feet D) 12 feet
Answer: B

92) The temperature at the South pole was –23° at 8 am. At 3 pm, it was 27°. By how many degrees did the temperature rise?
A) by –50° B) by –4° C) by 4° D) by 50°
Answer: D

93) In a certain location, the highest temperature recorded was 103°F. The lowest temperature recorded was 121 degrees less than the highest. What was the lowest temperature?
A) 18°F B) –18°F C) –138°F D) 0°F
Answer: B

Multiply.

94) $2 \cdot (-7)$
A) 5 B) 14 C) –5 D) –14
Answer: D

95) $-2 \cdot (-3)$
A) –5 B) 6 C) 5 D) –6
Answer: B

96) $(3)(-5)$
A) 15 B) 2 C) –2 D) –15
Answer: D

97) $(-7)(-8)$
A) –56 B) –15 C) 15 D) 56
Answer: D

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98) $31 \cdot 0$
A) 0 B) 1 C) 31 D) –31
Answer: A

99) $1 \cdot (-23)$
A) 23 B) 22 C) –23 D) –22
Answer: C

100) $-17(-4)$
A) 13 B) 68 C) –68 D) –13
Answer: B

101) $-1(-42)$
A) –42 B) –43 C) 43 D) 42
Answer: D

102) $-24 \cdot 0$
A) 24 B) 1 C) 0 D) –24
Answer: C

103) $(9)(-6)(-6)$
A) 324 B) –108 C) –324 D) 334
Answer: A

104) $(-9)(-3)(3)$
A) –81 B) 71 C) 81 D) 181
Answer: C

105) $(-5)(-7)(-3)$
A) –115 B) –5 C) 105 D) –105
Answer: D

106) $(-7)(-7)(-7)$
A) 343 B) –353 C) –333 D) –343
Answer: D

107) $-2 \cdot (-10) \cdot (-14)$
A) 34 B) –26 C) 280 D) –280
Answer: D

108) $9 \cdot (-10) \cdot 7 \cdot (-19)$
A) –13 B) 11,970 C) –611 D) –11,970
Answer: B

109) $-4 \cdot (-2) \cdot (-8) \cdot 6 \cdot (-10)$
A) –374 B) 3840 C) –3840 D) –18
Answer: B

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110) $5(-11)(11)0$

A) 5 B) 605 C) −605 D) 0

Answer: D

111) $(-9)(-14)(-9)0 \cdot 4$

A) 4536 B) −4536 C) 0 D) −1134

Answer: C

Simplify.

112) $(-1)^{22}$

A) −22 B) 1 C) 22 D) −1

Answer: B

113) $(-1)^{13}$

A) −13 B) −1 C) 13 D) 1

Answer: B

114) -1^{16}

A) 16 B) 1 C) −16 D) −1

Answer: D

115) $(-2)^4$

A) 8 B) −32 C) 16 D) −16

Answer: C

116) $(-2)^3$

A) 8 B) 2 C) −8 D) −4

Answer: C

117) -8^2

A) −64 B) 512 C) 64 D) −512

Answer: A

Write the following expression in words.

118) -4^5

A) The opposite of negative four to the negative fifth power
B) The opposite of four to the fifth power
C) Negative four to the fifth power
D) Negative four to the negative fifth power

Answer: B

119) $(-9)^{10}$

A) Negative nine to the tenth power
B) The opposite of nine to the tenth power
C) Negative nine to the negative tenth power
D) The opposite of negative nine to the negative tenth power

Answer: A

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Divide, if possible.

120) $\frac{-100}{4}$

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

Answer: A

121) $\frac{54}{-3}$

A) 18 B) –28 C) $-\frac{1}{18}$ D) –18

Answer: D

122) $-91 \div (-7)$

A) 3 B) 13 C) –13 D) $\frac{1}{13}$

Answer: B

123) $-75 \div 25$

A) –3 B) –13 C) 3 D) $-\frac{1}{3}$

Answer: A

124) $\frac{-56}{-28}$

A) –2 B) 2 C) –8 D) $\frac{1}{2}$

Answer: B

125) $\frac{224}{-14}$

A) $-\frac{1}{16}$ B) –16 C) –26 D) 16

Answer: B

126) $\frac{-255}{17}$

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

Answer: C

127) $\frac{-46}{2}$

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

Answer: B

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128) $\frac{0}{-8}$

A) 8 B) Undefined C) –8 D) 0

Answer: D

129) $\frac{-11}{0}$

A) $-\frac{11}{6}$ B) 0 C) $-\frac{11}{3}$ D) Undefined

Answer: D

Simplify.

130) 65 – (25 – 5)

A) 40 B) 35 C) 20 D) 45

Answer: D

131) 90 ÷ (6 ÷ 3)

A) 5 B) 45 C) 15 D) 88

Answer: B

132) $(14 - 10)^2 + (2 + 4)^2$

A) 116 B) 100 C) 52 D) 36

Answer: C

133) $2 \cdot 6 + 4(9 - 4) + 5$

A) 52 B) 37 C) 105 D) 49

Answer: B

134) 330 ÷ 11 – (4 + 2)

A) 66 B) 24 C) 26 D) 28

Answer: B

135) $5 \cdot (3 + 5)^2 - 3 \cdot (5 - 3)^2$

A) 388 B) 308 C) 1564 D) 1268

Answer: B

136) $10^2 + 11 \cdot 9 - (8 + 5 \cdot 4)$

A) 971 B) 211 C) 147 D) 171

Answer: D

137) $12 \cdot 9 - (14 - 8) \div 3 - (8 - 7)$

A) 91 B) 26 C) 105 D) 33

Answer: C

138) $6[7^2 + 4(3 + 3)]$

A) 384 B) 438 C) 1908 D) 66

Answer: B

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139) $2[-5 + 7(-8 + 4)]$

A) –20 B) –66 C) –38 D) –16

Answer: B

Simplify, if possible.

140) $-|-10| - |-11 - 4|$

A) 5 B) –5 C) –25 D) 25

Answer: C

141) $17 - |7 - 10| \cdot 9$

A) 44 B) 170 C) –10 D) –136

Answer: C

142) $19 - |11 - 10^2|$

A) –92 B) 20 C) –70 D) 108

Answer: C

143) $2 - |3 - 7|^2$

A) –12 B) –16 C) 12 D) –14

Answer: D

Simplify, if possible. If the answer is undefined, state so.

144) $\frac{2^2 - 1}{1 - 2^2}$

A) $\frac{3}{5}$ B) $-\frac{5}{3}$ C) 1 D) – 1

Answer: D

145) $\frac{7^2 - 5}{11 - 3^2}$

A) – 21 B) – 22 C) 22 D) 23

Answer: C

146) $\frac{55 - 5^2}{(-1)^2 - 2^2}$

A) $-\frac{80}{3}$ B) – 10 C) 10 D) – 150

Answer: B

147) $\frac{106 - 6^2}{(-4)^2 - 3^2}$

A) – 10 B) 10 C) $-\frac{82}{7}$ D) $\frac{82}{7}$

Answer: B

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148) $\frac{(-2)^3 + 98}{6(3 - 6) - 2(-10)}$

A) 48 B) 45 C) – 45 D) 90

Answer: B

149) $\frac{-3 \cdot 3^3 + 225 \div 5^2}{(-3)^2}$

A) 8 B) 10 C) – 8 D) – 10

Answer: C

150) $\frac{-72 \cdot 36 \div 6^2}{3 \cdot 9 - 27}$

A) Undefined B) 0 C) 27 D) –72

Answer: A

151) $\frac{-18 \cdot 225 \div 5^2}{9 \cdot 3 + 27}$

A) –3 B) 54 C) Undefined D) –375

Answer: A

152) $\frac{3 \cdot 9^2 - 27 \cdot 9}{7^4 - 6^3}$

A) –2 B) 1 C) 2 D) 0

Answer: D

Evaluate.

153) 4x, for x = 5

A) 5^4 B) 4^5 C) 9 D) 20

Answer: D

154) x + y, for x = 8 and y = –6

A) –48 B) 2 C) –14 D) 14

Answer: B

155) $\frac{y}{z}$, for y = –48 and z = 8

A) –6 B) 6 C) –8 D) 8

Answer: A

156) $\frac{4p}{q}$, for p = 28 and q = 7

A) 96 B) 84 C) 16 D) 28

Answer: C

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157) $\frac{5p}{q}$, for p = –35 and q = –5

A) 35 B) –25 C) 25 D) –35

Answer: A

158) $\frac{x + y}{8}$, for x = 72 and y = 32

A) 104 B) 13 C) 41 D) 76

Answer: B

159) $\frac{x - y}{8}$, for x = 40 and y = 64

A) –59 B) –3 C) 32 D) –24

Answer: B

160) $\frac{8x + 8y}{5}$, for x = 20 and y = 30

A) 40 B) 38 C) 80 D) 400

Answer: C

161) $\frac{4x - 4y}{3}$, for x = 12 and y = 21

A) –68 B) 12 C) –12 D) 9

Answer: C

162) $(-6x)^2$ for x = 5

A) 150 B) –150 C) –900 D) 900

Answer: D

163) $-2x^2$ for x = 2

A) 16 B) 8 C) –8 D) –16

Answer: C

164) $(x + 2y)^2$, for x = 2, y = 4

A) 20 B) 100 C) 16 D) 10

Answer: B

165) $4x^2 + 10y$, for x = 6, y = 5

A) 626 B) 920 C) 194 D) 160

Answer: C

166) $4x^2 - 9x + 2$, for x = 2

A) –8 B) –4 C) –10 D) 0

Answer: D

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167) $7x^2 + 6x + 3$, for $x = -2$

A) 19 B) −23 C) 9 D) 15

Answer: A

168) $3x^3 - 6x^2 + 37$, for $x = 2$

A) 27 B) 49 C) 37 D) 25

Answer: C

169) $-5x^3 + 6x^2 - 30$, for $x = -2$

A) 34 B) −2 C) 24 D) 22

Answer: A

170) $-3x^3 - 4x^2 - x + 8$, for $x = -2$

A) 42 B) 6 C) 18 D) 8

Answer: C

For the given expression, write two equal expressions with negative signs in different places.

171) $-\frac{13}{b}$

A) $\frac{b}{-13}$ and $\frac{-b}{13}$ B) $\frac{-13}{-b}$ and $\frac{-13}{-b}$ C) $\frac{-13}{b}$ and $\frac{13}{-b}$ D) $-\frac{-13}{b}$ and $-\frac{13}{-b}$

Answer: C

172) $\frac{-6}{b}$

A) $-\frac{6}{b}$ and $\frac{6}{-b}$ B) $-\frac{-6}{b}$ and $-\frac{6}{-b}$ C) $\frac{b}{-6}$ and $\frac{-b}{6}$ D) $--\frac{6}{b}$ and $\frac{-6}{-b}$

Answer: A

173) $\frac{17}{-b}$

A) $-\frac{17}{b}$ and $-\frac{-17}{b}$ B) $-\frac{17}{b}$ and $\frac{-17}{b}$ C) $\frac{-17}{-b}$ and $-\frac{-17}{b}$ D) $\frac{-17}{-b}$ and $-\frac{17}{b}$

Answer: B

174) $\frac{x}{-8}$

A) $-\frac{x}{8}$ and $\frac{-x}{8}$ B) $-\frac{x}{8}$ and $-\frac{-x}{8}$ C) $-\frac{-x}{8}$ and $\frac{-x}{8}$ D) $-\frac{8}{x}$ and $\frac{-8}{x}$

Answer: A

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175) $\frac{-x}{18}$

A) $-\frac{x}{18}$ and $\frac{x}{-18}$

B) $-\frac{18x}{18}$ and $\frac{18x}{-18}$

C) $-\frac{18}{x}$ and $\frac{-18}{x}$

D) $-\frac{x}{18}$ and $--\frac{x}{18}$

Answer: A

176) $-\frac{x}{15}$

A) $-\frac{-15}{x}$ and $-\frac{15}{-x}$

B) $\frac{-x}{15}$ and $\frac{15}{-x}$

C) $\frac{x}{-15}$ and $\frac{-x}{15}$

D) $\frac{-x}{-15}$ and $\frac{-x}{-15}$

Answer: C

Evaluate $\frac{-a}{b}$, $\frac{a}{-b}$, and $-\frac{a}{b}$ for the given values.

177) a = 12 , and b = 2

A) –6; –6; –6 B) –6; –6; 6 C) 6; 6; 6 D) –12; 6; 12

Answer: A

178) a = 42 , and b = 2

A) –21; –21; –21 B) 21; 21; 21 C) –42; 21; 42 D) –21; –21; 21

Answer: A

Evaluate.

179) $2x^2$, for x = 5 and x = –5.

A) 100, 50 B) 50, 50 C) –50, 50 D) 50, –50

Answer: B

180) x^3, for x = 5 and x = –5.

A) –125, –125 B) 125, 125 C) 0, 0 D) 125, –125

Answer: D

181) x^4, for x = 5 and x = –5.

A) 625, 625 B) 625, –625 C) 625, –25 D) 25, 25

Answer: A

182) x^5, for x = 2 and x = –2.

A) 0, 0 B) 32, 32 C) 32, –32 D) –32, –32

Answer: C

183) a^8, for x = 2 and x = –2.

A) 0, 0 B) –256, –256 C) 256, –256 D) 256, 256

Answer: D

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Use the distributive law to write an equivalent expression.

184) $4(x + 7)$

A) $x + 28$ B) $4x + 7$ C) $4x + 28$ D) $28x$

Answer: C

185) $4(1 - y)$

A) $4 + 4y$ B) $1 - 4y$ C) $4 - y$ D) $4 - 4y$

Answer: D

186) $6(6m + 7)$

A) $36m + 42$ B) $252m$ C) $6m + 42$ D) $36m + 7$

Answer: A

187) $3(x + 2 + 3y)$

A) $x + 6 + 9y$ B) $3x + 2 + 3y$ C) $3x + 6 + 9y$ D) $3x + 6 + 3y$

Answer: C

188) $-(3x - 2)$

A) $-3x + 2$ B) $6x$ C) $3x - 2$ D) $-3x - 2$

Answer: A

189) $-5(4m - 9)$

A) $45m - 20$ B) $-45m + 20$ C) $-20m - 45$ D) $-20m + 45$

Answer: D

190) $-5(9x - 9y + 8)$

A) $-45x - 9y + 8$ B) $-45x - 45y - 40$ C) $-45x + 45 + 8$ D) $-45x + 45y - 40$

Answer: D

191) $(y + 3)8$

A) $8y + 3$ B) $y + 24$ C) $3y + 24$ D) $8y + 24$

Answer: D

192) $(9 + u + v)8$

A) $72 + 9u + 9v$ B) $9 + u + 8v$ C) $72 + u + v$ D) $72 + 8u + 8v$

Answer: D

193) $(5\ell + m + 9)7$

A) $35\ell + 7m + 63$ B) $35\ell + 9m + 63$ C) $5\ell + m + 63$ D) $35\ell + m + 9$

Answer: A

List the terms of the expression.

194) $4x^3 + 5x^2 - 3x + 6$

A) $4, x^3, 5, x^2, -3, x, 6$ B) $4x^3, 5x^2, -3x, 6$ C) $4x^3, 5x^2, 3x, 6$ D) $4x^3 + 5x^2, -3x + 6$

Answer: B

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195) $3x^4 - 4x^2 - 2x - 3$

A) 3, x^4, 4, x^2, 2, x, 3
B) $3x^4$, $-4x^2$, $-2x$, -3
C) 3, x^4, -4, x^2, -2, x, -3
D) $3x^4$, $4x^2$, 2x, 3

Answer: B

196) $-3x^5 + 5x^3 - 4x^2 + 9x$

A) $3x^5$, $5x^3$, $4x^2$, 9x
B) -3, x^5, 5, x^3, 4, x^2, 9, x
C) $-3x^5$, $-5x^3$, $-4x^2$, 9x
D) $-3x^5$, $5x^3$, $-4x^2$, 9x

Answer: D

197) $2a^5 - 4x^4 + 5$

A) $2a^5$, $-4x^4$, 5
B) $2a^5$, $4x^4$, 5
C) $2a^5$, $-4x^4$, 5x
D) 2, a^5, -4, x^4, 5

Answer: A

198) $-2t^7 + 6t^4 - 3t^2 + 1$

A) $-2t^7$, $6t^4$, $-3t^2$, 1
B) $2t^7$, $6t^4$, $-3t^2$, 1
C) $-2t^7$, $6t^4$, $3t^2$, 1
D) -2, t^7, 6, t^4, -3, t^2, 1

Answer: A

199) $6n^4 - 11n^3 - 5n + 21$

A) 6, n^4, -11, n^3, -5, n, 21
B) $6n^4$, $-11n^3$, 5n, 21
C) $6n^4$, $-11n^3$, $-5n$, 21
D) $6n^4$, $11n^3$, $-5n$, 21

Answer: C

200) $2y^{11} - 16y^2 - 3y$

A) 2, y^{11}, -16, y^2, -3, y
B) $2y^{11}$, $-16y^2$, $-3y$
C) $2y^{11}$, $-16y^2$, 3y
D) $2y^{11}$, $16y^2$, $-3y$

Answer: B

Combine like terms.

201) $9x + 14x$

A) 126x
B) 46x
C) 23x
D) $23x^2$

Answer: C

202) $3x - 8x$

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

Answer: D

203) $-9b + 3b$

A) 6b
B) $-6b$
C) $-12b$
D) $-6b^2$

Answer: B

204) $14x + 10 - 8x - 4$

A) $-6x + 6$
B) $22x + 14$
C) $6x + 6$
D) $6x + 10 - 4$

Answer: C

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205) $17x - 9y + 14 - 30x - 6 - 6y$

A) $-13x - 15y + 8$ B) $13x - 3y + 8$ C) $13x - 15y + 8$ D) $-13x - 3y + 8$

Answer: A

206) $-3m^2 - 9m^2$

A) Can't be simplified B) $-12m^4$ C) $-24m$ D) $-12m^2$

Answer: D

207) $-7x^3y^4 + 8x^3y^4 - 9x^3y^4 - 4x^3y^4 + 8x^3y^4$

A) Can't be simplified B) $10x^3y^4$ C) $-4x^3y^4$ D) $-20x^3y^4$

Answer: C

208) $4x^5 + 9x^5 - 3x^5$

A) $-108x^5$ B) $10x^{15}$ C) Can't be simplified D) $10x^5$

Answer: D

209) $9x^9 + 5x^6 - 3x^9$

A) $11x^6$ B) Can't be simplified C) $6x^9 + 5x^6$ D) $11x^{24}$

Answer: C

210) $-3m^2 + 2m^2 + 5m^2 + 6m^2$

A) $20m$ B) $10m^2$ C) Can't be simplified D) $10m^8$

Answer: B

211) $5a^8 - 13a^8 + 3a^3 + 5a^8 - 12a^3$

A) Can't be simplified B) $-12a^{11}$ C) $-12a^8$ D) $-3a^8 - 9a^3$

Answer: D

212) $-12m^9 + 4m^7 - 2m^6 + 3m^9 - 7m^7$

A) Can't be simplified B) $-9m^9 - 3m^7 - 2m^6$

C) $-4m^{22}$ D) $-88m$

Answer: B

213) $9xy + 4x^2 - 2xy + 5x^2 + 11$

A) $11xy + 9x^2 + 11$ B) $7xy + 9x^2 + 11$ C) $16x^3y + 11$ D) $27x^3y$

Answer: B

214) $6x^2y + 5xy^2 - 4x^2y + 14xy^2$

A) $21x^3y^3$ B) $2x^2y + 19xy^2$ C) $21x^2y^2$ D) $10x^2y + 10xy^2$

Answer: B

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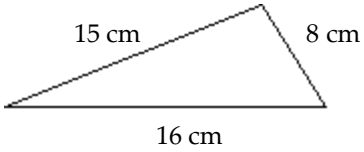
Find the perimeter of the polygon.

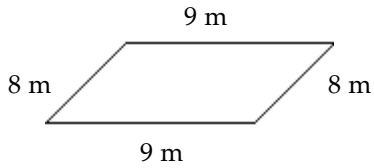
215)



A) 64 cm B) 39 cm C) 31 cm D) 38 cm

Answer: B

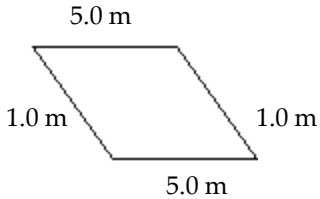
216)



A) 26 m B) 25 m C) 34 m D) 17 m

Answer: C

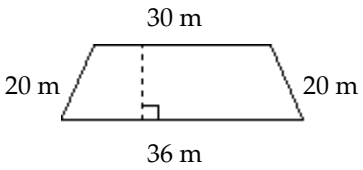
217)



A) 12 m B) 11 m C) 7 m D) 6 m

Answer: A

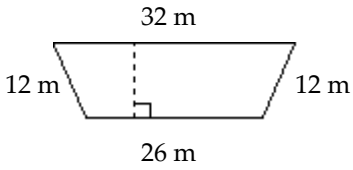
218)



A) 600 m B) 56 m C) 36 m D) 106 m

Answer: D

219)



A) 32 m B) 312 m C) 44 m D) 82 m

Answer: D

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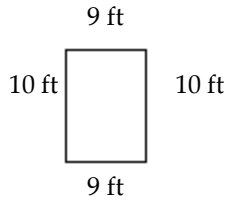
220)



A) 36 ft B) 38 ft C) 19 ft D) 2 ft

Answer: B

Solve the problem.

221) Find the perimeter of a rectangular farm measuring 3 mi by 8 mi.

A) 10 mi B) 11 mi C) 22 mi D) 12 mi

Answer: C

222) Find the perimeter of a square room with side 11 ft.

A) 22 ft B) 54 ft C) 44 ft D) 242 ft

Answer: C

223) Find the perimeter of a postage stamp measuring 48 mm by 37 mm.

A) 1776 mm B) 170 mm C) 180 mm D) 85 mm

Answer: B

224) Find the perimeter of a checkerboard measuring 26 cm on a side.

A) 52 cm B) 78 cm C) 104 cm D) 676 cm

Answer: C

225) A small farm field is a square measuring 280 ft on a side. What is the perimeter of the field? If you double the length of each side of the field, what is the new perimeter?

A) 560 ft, 2240 ft B) 280 ft, 1120 ft C) 560 ft, 1120 ft D) 1120 ft, 2240 ft

Answer: D

226) What will it cost to buy ceiling molding to go around a rectangular room with length 20 ft and width 8 ft? The molding costs $2 per foot.

A) $80 B) $32 C) $112 D) $56

Answer: C

227) Tom is going to build a fence around his garden which is a rectangle measuring 8 m by 16 m. He will first put in posts which will be 4 m apart. If the posts cost $4 each, what will be the total cost for all the posts?

A) $48 B) $32 C) $24 D) $40

Answer: A

Classify the pair as either equivalent expressions or equivalent equations.

228) $2x = 6; 5x = 15$

A) Equivalent equations B) Equivalent expressions

Answer: A

229) $10x + 2; 8x + 2 + 2x$

A) Equivalent equations B) Equivalent expressions

Answer: B

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230) $x + 2 = -4; 2x = -12$

A) Equivalent equations B) Equivalent expressions

Answer: A

231) $12(x - 1); 9x - 12 + 3x$

A) Equivalent expressions B) Equivalent equations

Answer: A

Solve using the addition principle.

232) $x + 7 = 12$

A) $\frac{7}{12}$ B) 19 C) 5 D) –5

Answer: C

233) $a - 12 = 8$

A) –20 B) 4 C) 20 D) –4

Answer: C

234) $2 = b - 18$

A) 16 B) –16 C) –20 D) 20

Answer: D

235) $a + 8 = 9$

A) 17 B) 1 C) –1 D) –17

Answer: B

236) $-3 = b + 19$

A) –16 B) 22 C) 16 D) –22

Answer: D

237) $-21 = f - 10$

A) –31 B) –11 C) 31 D) 11

Answer: B

238) $-7 = 5 + f$

A) 12 B) –12 C) –2 D) 2

Answer: B

239) $t - 2 = 18$

A) 16 B) 20 C) –16 D) –20

Answer: B

240) $11 = -20 + n$

A) –31 B) 9 C) –9 D) 31

Answer: D

241) $x - 8 = -8$

A) 0 B) 1 C) 16 D) –16

Answer: A

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Solve using the division principle.

242) $8x = 48$

A) $\frac{1}{6}$ B) 6 C) 384 D) 40

Answer: B

243) $6a = -54$

A) −9 B) 60 C) −60 D) 1

Answer: A

244) $-12 = 6k$

A) 1 B) 18 C) −2 D) −18

Answer: C

245) $-3x = -18$

A) 6 B) −15 C) 2 D) 15

Answer: A

246) $3b = -45$

A) −48 B) 48 C) 1 D) −15

Answer: D

247) $22 = -2z$

A) −24 B) 24 C) 1 D) −11

Answer: D

248) $-78 = -6n$

A) 13 B) 72 C) −72 D) 2

Answer: A

249) $-4s = -64$

A) 2 B) 60 C) −60 D) 16

Answer: D

250) $10g = 0$

A) −10 B) 10 C) 0 D) 1

Answer: C

251) $-5d = 0$

A) 1 B) −5 C) 5 D) 0

Answer: D

Solve using the addition or division principle.

252) $a - 15 = 3$

A) −18 B) 18 C) −12 D) 12

Answer: B

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253) $3 = b - 9$

A) 6 B) 12 C) −6 D) −12

Answer: B

254) $6a = -18$

A) 24 B) 1 C) −24 D) −3

Answer: D

255) $-18 = 9k$

A) 1 B) −27 C) −2 D) 27

Answer: C

256) $-2 = b - 15$

A) −17 B) 17 C) 13 D) −13

Answer: C

257) $-3 = f - 15$

A) −12 B) 12 C) −18 D) 18

Answer: B

258) $2b = -32$

A) 1 B) −34 C) 34 D) −16

Answer: D

259) $108 = -9z$

A) −12 B) −117 C) 117 D) 1

Answer: A

260) $12 = -25 + n$

A) 13 B) 37 C) −37 D) −13

Answer: B

261) $-4s = -44$

A) 2 B) 40 C) 11 D) −40

Answer: C

Solve the equation.

262) $3r + 4 = 22$

A) 3 B) 19 C) 6 D) 15

Answer: C

263) $10n - 4 = 36$

A) 34 B) 4 C) 30 D) 7

Answer: B

264) $7 = 2x - 3$

A) 5 B) 12 C) 6 D) 8

Answer: A

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265) $-16 = -9x - 7$

A) 8 B) 0 C) 4 D) 1

Answer: D

266) $164 = 12x + 20$

A) 136 B) 6 C) 132 D) 12

Answer: D

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