

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

Write a positive or negative integer that describes the situation.

1) 180 feet above sea level

A) -180

B) 180

Answer: B

2) 37° above zero

A) 37

B) -37

Answer: A

3) \$396 loss

A) -396

B) 396

Answer: A

4) finding 44 cents

A) 44

B) -44

Answer: A

5) The height of the mountain was 11,014 feet.

A) 11,014

B) -11,014

Answer: A

6) The submarine dove to a depth of 135 feet below the surface of the water.

A) 135

B) -135

Answer: B

7) The team gained 64 yards in rushing during the first quarter.

A) 64

B) -64

Answer: A

8) John lost 17 pounds while on his diet.

A) 17

B) -17

Answer: B

9) The stock market gained 59 points on Monday.

A) -59

B) 59

Answer: B

10) During one year, 24 employees started work at Newline Manufacturing Company.

A) 24

B) -24

Answer: A

11) A football team gained 4 yards on one play.

A) -4

B) 4

Answer: B

12) In one state, the highest point is 2692 feet above sea level.

A) -2692

B) 2692

Answer: B

13) One country exported \$71,400,000 more than it imported, giving it a positive trade balance.

A) 71,400,000

B) -71,400,000

Answer: A

14) The sales at Andrea's Formal Wear Shop this week were \$4684 less than the sales last week.

A) 4684

B) -4684

Answer: B

15) Mr. Voss increased his speed by 12 miles per hour.

A) -12

B) 12

Answer: B

16) On a cloudy day, the water temperature in the swimming pool drops 5 degrees.

A) -5

B) 5

Answer: A

17) This year corn production increased 6,000 pounds on Steve's farm.

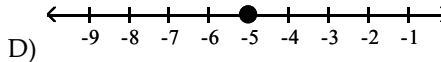
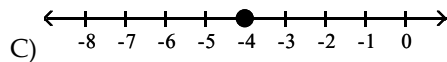
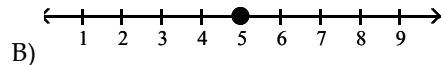
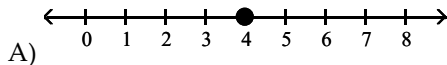
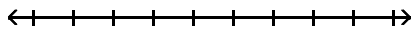
A) 6,000

B) -6,000

Answer: A

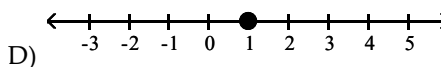
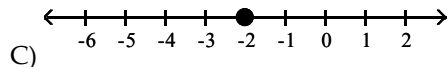
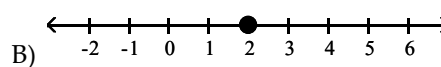
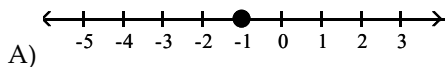
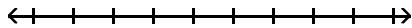
**Graph the integer on a number line.**

18) 4



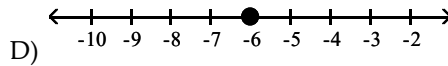
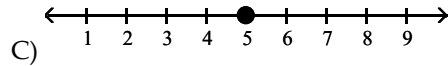
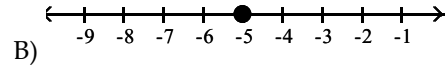
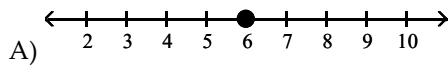
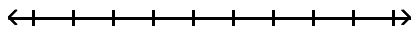
Answer: A

19) -2



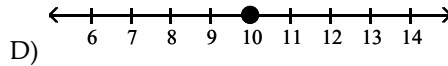
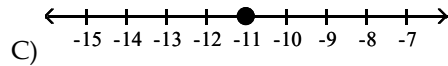
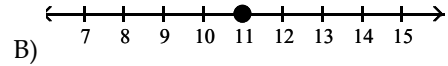
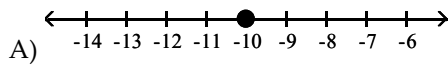
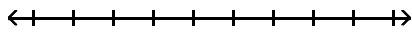
Answer: C

20) -6



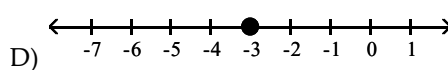
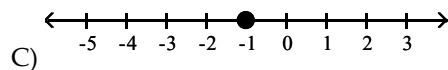
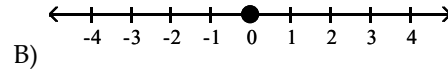
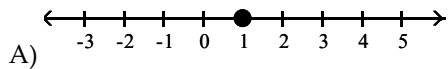
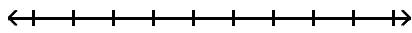
Answer: D

21) 10



Answer: D

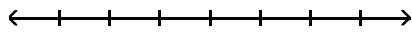
22) 0



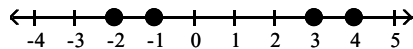
Answer: B

**Graph the integers on the number line.**

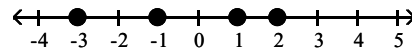
23) -3, -1, 1, 3



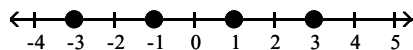
A)



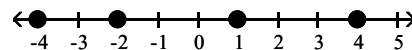
B)



C)

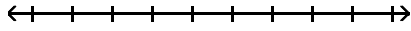


D)

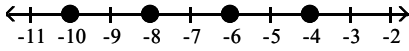


Answer: C

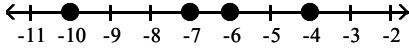
24) -10, -8, -6, -4



A)

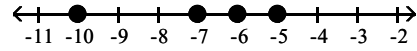


C)

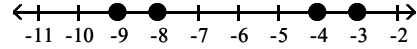


Answer: A

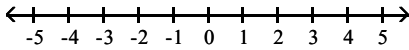
B)



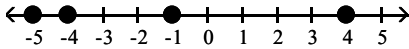
D)



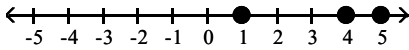
25) 4, 5, -4, 1



A)

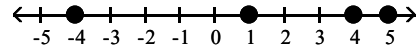


C)

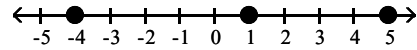


Answer: B

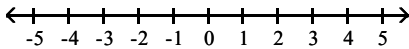
B)



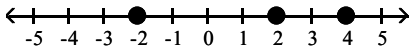
D)



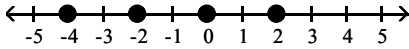
26) 2, 0, -2, 4



A)

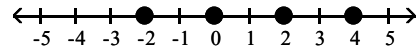


C)

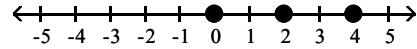


Answer: B

B)



D)



Compare the integers. Insert  $<$  or  $>$  to make the statement true.

27)  $3 \underline{\quad} 8$   
A)  $<$

Answer: A

B)  $>$

28)  $5 \underline{\quad} 1$   
A)  $>$

Answer: A

B)  $<$

29)  $-10 \underline{\quad} 7$   
A)  $>$

Answer: B

B)  $<$

30)  $10 \underline{\quad} -6$   
A)  $>$

Answer: A

B)  $<$

31)  $-7 \underline{\quad} -5$   
A)  $>$

Answer: B

B)  $<$

32)  $0 \underline{\quad} 5$   
A)  $<$

Answer: A

B)  $>$

33)  $0 \underline{\quad} -1$   
A)  $<$

Answer: B

B)  $>$

34)  $6 \underline{\quad} 0$   
A)  $<$

Answer: B

B)  $>$

35)  $-10 \underline{\quad} 0$   
A)  $<$

Answer: A

B)  $>$

**Find the absolute value.**

36)  $|17|$

A)  $-17$

B)  $17$

C)  $34$

D)  $0$

Answer: B

37)  $|-24|$

A)  $48$

B)  $0$

C)  $24$

D)  $-24$

Answer: C

38)  $|1|$

A)  $0$

B)  $2$

C)  $-1$

D)  $1$

Answer: D

39)  $|41|$

A)  $41$

B)  $0$

C)  $-41$

D)  $\frac{1}{41}$

Answer: A

40)  $|-69|$

A)  $-69$

B)  $\frac{1}{69}$

C)  $0$

D)  $69$

Answer: D

**Find the opposite of the number.**

41) 20

A) -20

B) 0

C) 20

D) 1

Answer: A

42) -12

A) 12

B) does not exist

C) -12

D) 0

Answer: A

43) 7

A) 0

B) 7

C) -1

D) -7

Answer: D

44) -2

A) -2

B) -1

C) 0

D) 2

Answer: D

45) 20

A) 1

B) -20

C) 20

D) 0

Answer: B

46) -16

A) 0

B) -16

C) -1

D) 16

Answer: D

47) 0

A) does not exist

B) 0

C) 1

D) -1

Answer: B

**Simplify the expression.**

48)  $-(-8)$

A) -8

B) -9

C) 8

D) 0

Answer: C

49)  $-|-11|$

A) -11

B) 1

C) -1

D) 11

Answer: A

50)  $-|-65|$

A) -65

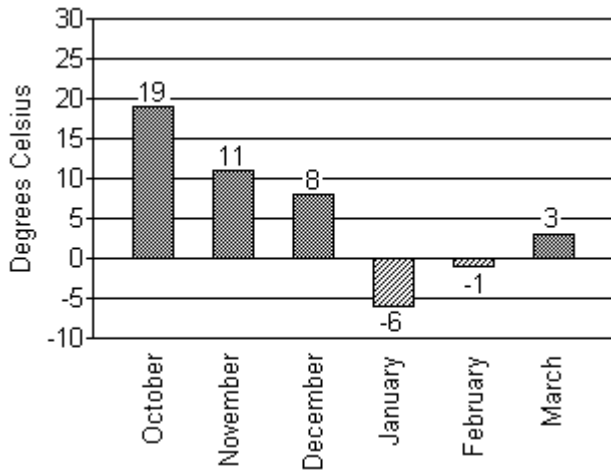
B)  $\frac{1}{65}$

C) 0

D) 65

Answer: A

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



- 51) In which month was the recorded temperature closest to  $0^{\circ}\text{C}$ ?  
 A) February                      B) October                      C) January                      D) March

Answer: A

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

Answer: B

- 53) In which month was the recorded temperature closest to  $-5^{\circ}\text{C}$ ?  
 A) March                      B) December                      C) January                      D) February

Answer: C

**Fill in the blank. Then write an addition problem with addends and the sum that describes the situation.**

- 54) A loss of \$2 followed by a loss of \$7 results in a \_\_\_\_\_.  
 A) loss of \$9;  $2 + 7 = 9$                       B) loss of \$9;  $-2 + (-7) = -9$   
 C) gain of \$9;  $2 + 7 = 9$                       D) gain of \$9;  $-2 + (-7) = -9$

Answer: D

- 55) A loss of \$1 followed by a gain of \$5 results in a \_\_\_\_\_.  
 A) loss of \$4;  $1 + (-5) = -4$                       B) gain of \$6;  $1 + 5 = 6$   
 C) loss of \$6;  $-1 + (-5) = -6$                       D) gain of \$4;  $-1 + 5 = 4$

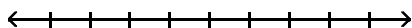
Answer: D

- 56) A gain of \$4 followed by a loss of \$9 results in a \_\_\_\_\_.  
 A) loss of \$13;  $-4 + (-9) = -13$                       B) gain of \$13;  $4 + 9 = 13$   
 C) gain of \$5;  $-4 + 9 = 5$                       D) loss of \$5;  $4 + (-9) = -5$

Answer: D

**Add the numbers using the number line.**

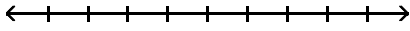
57)  $1 + (-5)$



- A) 4                      B) -4                      C) 6                      D) -6

Answer: B

58)  $-4 + 2$



A) 2

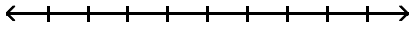
B) -2

C) 6

D) -6

Answer: B

59)  $-4 + 0$



A) -40

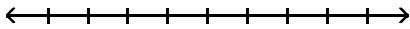
B) 0

C) -4

D) 4

Answer: C

60)  $-6 + (-9)$



A) -3

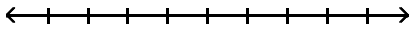
B) -15

C) 15

D) 3

Answer: B

61)  $-5 + (4)$



A) 9

B) -1

C) 1

D) -9

Answer: B

**Find the sum without the use of a number line.**

62)  $(-5) + (-6)$

A) 11

B) -11

C) 1

D) -1

Answer: B

63)  $(-56) + (-41)$

A) -97

B) 15

C) 97

D) -15

Answer: A

64)  $-15 + (-11)$

A) 26

B) 4

C) -4

D) -26

Answer: D

65)  $16 + 12$

A) -28

B) 28

C) 4

D) -4

Answer: B

66)  $-11 + (-20)$

A) -9

B) -31

C) 31

D) 9

Answer: B

67)  $-15 + (-15)$

A) 30

B) -30

C) 31

D) -31

Answer: B



- 68)  $(-7) + (-17)$   
A) -10                      B) -24                      C) 24                      D) -25  
Answer: B
- 69)  $-20 + (-11)$   
A) -32                      B) 31                      C) 9                      D) -31  
Answer: D
- 70)  $(-64) + (-45)$   
A) -109                      B) 109                      C) 19                      D) -111  
Answer: A
- 71)  $72 + 35$   
A) 109                      B) 107                      C) 108                      D) 106  
Answer: B
- 72)  $-96 + (-37)$   
A) 134                      B) -133                      C) -134                      D) 133  
Answer: B
- 73)  $5 + (-6)$   
A) 1                      B) 11                      C) -1                      D) -11  
Answer: C
- 74)  $(-3) + 4$   
A) -1                      B) 7                      C) -7                      D) 1  
Answer: D
- 75)  $81 + (-78)$   
A) 3                      B) -159                      C) -3                      D) 159  
Answer: A
- 76)  $-15 + 25$   
A) -40                      B) 40                      C) 10                      D) -10  
Answer: C
- 77)  $29 + (-94)$   
A) 65                      B) 123                      C) -65                      D) -123  
Answer: C
- 78)  $(-3) + 5$   
A) -8                      B) 8                      C) 2                      D) -2  
Answer: C
- 79)  $-7 + 4$   
A) 3                      B) -3                      C) -11                      D) 11  
Answer: B

80)  $7 + (-7)$

A) 14

B) 7

C) -7

D) 0

Answer: D

81)  $-84 + 27$

A) 57

B) 111

C) -57

D) -111

Answer: C

82)  $24 + (-15) + (-4)$

A) 35

B) 13

C) 43

D) 5

Answer: D

83)  $1 + 16 + (-5)$

A) 22

B) -10

C) 12

D) -20

Answer: C

84)  $(-19) + 8 + (-17)$

A) 44

B) 6

C) 10

D) -28

Answer: D

85)  $(-18) + (-6) + (-7) + (-7)$

A) -2

B) -38

C) 12

D) 10

Answer: B

86)  $6 + (-13) + 18 + (-3)$

A) 40

B) -28

C) 8

D) -22

Answer: C

87)  $(-8) + (-50) + 77 + (-35)$

A) 54

B) 0

C) -170

D) -16

Answer: D

**Solve the problem.**

88) The temperature at 4 p.m. on January 22 was  $-10^{\circ}$  Fahrenheit. By 9 p.m. the temperature had risen 24 degrees. Find the temperature at 9 p.m.

A)  $14^{\circ}$

B)  $-14^{\circ}$

C)  $-34^{\circ}$

D)  $34^{\circ}$

Answer: A

89) Lauren scored 17 points in her basketball game on Monday, 3 points on Wednesday, 15 points on Friday, and 7 points on Saturday. Find her total points scored for the week.

A) 43 points

B) 42 points

C) 41 points

D) 35 points

Answer: B

90) The following shows a summary of Marco's bank account activity over the past month. Add the values in the Amount column to find his current balance.

Activity	Amount
Previous balance	\$470
Car payment	-\$120
Paycheck deposit	\$889
Rent payment	-\$495

- A) \$744                                      B) \$1734                                      C) \$1974                                      D) \$984

Answer: A

91) The following table shows Henry's score after four rounds of a card game. What is Henry's score at the end of round 4?

Round 1	Round 2	Round 3	Round 4
-1	1	-8	10

- A) -18                                      B) 2                                      C) -2                                      D) 18

Answer: B

92) In four rounds of a card game, you get scores of 1, -3, -8, and 6. What is your final score?

- A) -4                                      B) -18                                      C) 18                                      D) 4

Answer: A

93) The temperature at the South Pole station registered 2°F one day. The following day, it registered -44°F. By how many degrees did the temperature drop?

- A) -42°F                                      B) -46°F                                      C) 46°F                                      D) 42°F

Answer: C

94) A bike road race starts at an elevation of 950 ft. and passes through 5 stages where the elevation increases (decreases) by -101 ft., -514 ft., 283 ft., 211 ft., and 440 ft. At what elevation does the race end?

- A) 2499 ft.                                      B) 1269 ft.                                      C) 2216 ft.                                      D) -2499 ft.

Answer: B

95) A corporation's bank account has \$6531 in it when the treasurer writes checks for \$1765, \$1708, and \$582. Then, deposits of \$1360 and \$4184 are made. What is the new balance?

- A) \$8602                                      B) -\$5042                                      C) \$5042                                      D) \$8020

Answer: D

96) Jack's checking account was overdrawn by \$86. He deposited \$53 into his account. What is his new balance?

- A) \$139                                      B) -\$33                                      C) \$33                                      D) -\$139

Answer: B

97) The temperature was 73°F in the morning, but it dropped 16°F in the afternoon and another 6°F in the evening. What was the temperature in the evening?

- A) -63°F                                      B) 63°F                                      C) -51°F                                      D) 51°F

Answer: D

98) Salve opened a new checking account with a \$615 deposit. The bank charged her \$11 to print her checks. She also wrote a \$87 check to buy groceries and a \$75 check to pay her phone bill. What is the new balance in her account?

- A) \$638                                      B) \$464                                      C) \$442                                      D) \$788

Answer: C

99) Marco had \$598 in his checking account. He wrote a \$198 check for his car payment, deposited his \$693 paycheck, and then wrote a \$456 check for his rent. What is the current balance in his account?

- A) \$1549                                      B) \$1033                                      C) \$1945                                      D) \$637

Answer: D

100) Arlene begins her mountain hike at 53 feet above sea level. She hikes 54 feet toward the peak of the mountain. What is her new height in feet? Represent the answer as an integer.

- A) 108 ft                                      B) 106 ft                                      C) 109 ft                                      D) 107 ft

Answer: D

101) The temperature at 2 p.m. on October 30 was  $-14$  degrees Fahrenheit. By 11 p.m. the temperature had risen 16 degrees. What is the temperature at 11 p.m? Represent the answer as an integer.

- A)  $30^{\circ}\text{F}$                                       B)  $-30^{\circ}\text{F}$                                       C)  $-2^{\circ}\text{F}$                                       D)  $2^{\circ}\text{F}$

Answer: D

102) On part of a scenic tour of underground caves, Jared and Benny started at an elevation of  $-32$  feet. They then rose 17 feet. What was their elevation at this point? Represent the answer as an integer.

- A)  $-15$  ft                                      B)  $-49$  ft                                      C) 15 ft                                      D) 49 ft

Answer: A

**Write as an equivalent addition statement. (Do not evaluate.)**

103)  $1 - 21$

- A)  $1 + 21$                                       B)  $21 + (-1)$                                       C)  $21 + 1$                                       D)  $1 + (-21)$

Answer: D

104)  $-4 - 14$

- A)  $-4 + 14$                                       B)  $-4 + (-14)$                                       C)  $14 + (-4)$                                       D)  $-18$

Answer: B

105)  $6 - (-19)$

- A)  $-19 + (-6)$                                       B)  $6 + (-19)$                                       C)  $19 + (-6)$                                       D)  $6 + 19$

Answer: D

106)  $-21 - (-14)$

- A)  $21 + 14$                                       B)  $-21 + 14$                                       C)  $-21 + (-14)$                                       D)  $21 + (-14)$

Answer: B

107)  $5 - (-27)$

- A)  $5 + 27$                                       B)  $5 + (-27)$                                       C)  $-5 + (-27)$                                       D)  $-5 + 27$

Answer: A





131) Stuart has a balance of  $-\$30$  in his bank account. To avoid further charges, he must have a balance of  $\$21$ . What is the minimum he can deposit to avoid further charges?

- A)  $-\$9$                       B)  $\$51$                       C)  $-\$51$                       D)  $\$9$

Answer: B

132) Nikki is fishing from a bank 14 feet above water level. In this location, the fish tend to feed at 44 feet below the surface. How long must Nikki's fish line be to reach the fish?

- A)  $-30$  ft.                      B) 30 ft.                      C)  $-14$  ft.                      D) 58 ft.

Answer: D

133) Wayne has  $\$16$  in his bank account. A check written against his account for  $\$32$  arrives at the bank. What is his balance?

- A)  $-\$48$                       B)  $\$48$                       C)  $-\$16$                       D)  $\$16$

Answer: C

134) The revenue for a manufacturing company in 2004 was  $\$61,720$  and their total costs were  $\$65,220$ . What was the net?

- A)  $-\$3500$                       B)  $\$126,940$                       C)  $\$3500$                       D)  $-\$126,940$

Answer: A

135) The temperature one day was reported to be  $37^{\circ}\text{F}$ . The next day, it was reported to be  $-4^{\circ}\text{F}$ . By how many degrees did the temperature drop?

- A)  $-41^{\circ}\text{F}$                       B)  $41^{\circ}\text{F}$                       C)  $-33^{\circ}\text{F}$                       D)  $33^{\circ}\text{F}$

Answer: B

136) In a certain location, the highest temperature recorded was  $103^{\circ}\text{F}$ . The lowest temperature recorded there was 135 degrees lower than the highest. What was the lowest temperature recorded there?

- A)  $-138^{\circ}\text{F}$                       B)  $-32^{\circ}\text{F}$                       C)  $32^{\circ}\text{F}$                       D)  $0^{\circ}\text{F}$

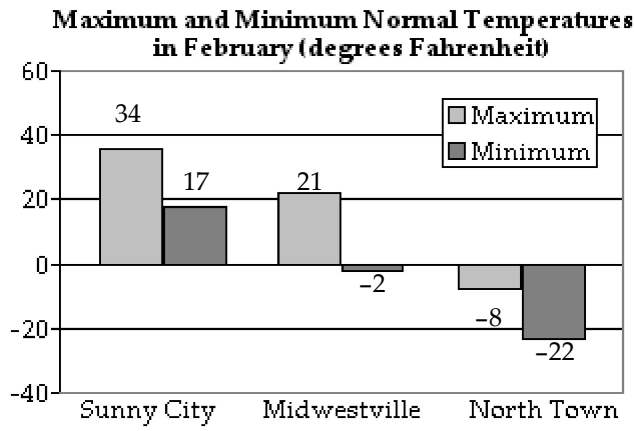
Answer: B

137) The list price of a car is  $\$19,789$ . The manufacturer offers a rebate of  $\$681$ . What is the final price of the car?

- A)  $\$20,370$                       B)  $\$19,008$                       C)  $\$19,108$                       D)  $\$20,470$

Answer: C

138)

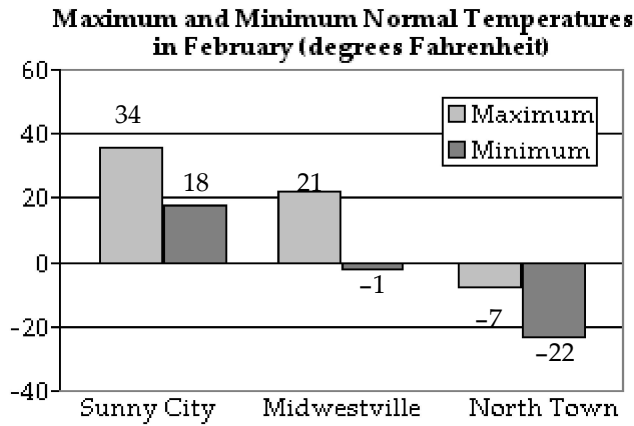


Calculate the difference between the maximum and minimum temperature in February for Sunny City.

- A) 23°F                      B) 14°F                      C) 17°F                      D) -17°F

Answer: C

139)



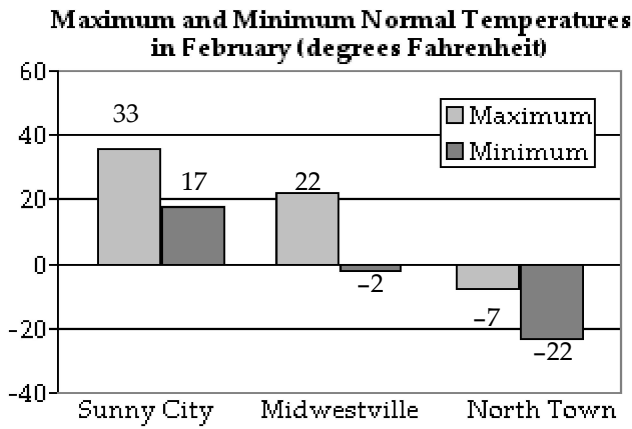
Calculate the difference between the maximum and minimum temperature in February for Midwestville.

- A) -22°F                      B) 15°F                      C) 22°F                      D) 16°F

Answer: C



140)



Calculate the difference between the maximum and minimum temperature in February for North Town.

- A)  $24^{\circ}\text{F}$                       B)  $15^{\circ}\text{F}$                       C)  $16^{\circ}\text{F}$                       D)  $-15^{\circ}\text{F}$

Answer: B

**Perform the indicated multiplication.**

141)  $7(9)$

- A) 56                                      B) 63                                      C) 630                                      D) 53

Answer: B

142)  $-6(-10)$

- A) -54                                      B) 60                                      C) -60                                      D) 50

Answer: B

143)  $-7(5)$

- A) 25                                      B) 35                                      C) -28                                      D) -35

Answer: D

144)  $-15(-11)$

- A) 180                                      B) 176                                      C) 165                                      D) -180

Answer: C

145)  $-20(16)$

- A) 300                                      B) -336                                      C) -300                                      D) -320

Answer: D

146)  $0(-10)$

- A) 10                                      B) 0                                      C) -10                                      D) -20

Answer: B

147)  $-16(16)$

- A) 256                                      B) 272                                      C) -272                                      D) -256

Answer: D

- 148)  $9(-9)$   
 A) 81                                      B) -81                                      C) -90                                      D) 90  
 Answer: B
- 149)  $-4(-4)$   
 A) 16                                        B) 20                                        C) -16                                      D) -20  
 Answer: A
- 150)  $-14(-7)$   
 A) 98                                        B) -112                                      C) 105                                      D) 112  
 Answer: A
- 151)  $(-6)(-7)$   
 A) 13                                        B) 42                                        C) -42                                      D) -13  
 Answer: B
- 152)  $(2)(-3)$   
 A) -1                                        B) 6                                         C) -6                                        D) 1  
 Answer: C
- 153)  $(0)(-30)$   
 A) 0                                         B) 1                                         C) 30                                        D) -30  
 Answer: A
- 154)  $5(-7)(-7)$   
 A) -70                                      B) 245                                      C) -245                                      D) 255  
 Answer: B
- 155)  $-4(-4)(6)$   
 A) -96                                      B) 86                                        C) 96                                        D) 196  
 Answer: C
- 156)  $(-7)(-3)(3)$   
 A) 63                                        B) 53                                        C) -63                                      D) 163  
 Answer: A
- 157)  $(3)(-1)(5)(-9)$   
 A) -135                                      B) 135                                      C) 7                                         D) 48  
 Answer: B
- 158)  $(-4)(-4)(0)(3)$   
 A) -48                                      B) 0                                         C) 48                                        D) 38  
 Answer: B
- 159)  $-5(-6)(3)$   
 A) 190                                      B) 90                                        C) -90                                      D) 80  
 Answer: B

160)  $4(-6)(-6)$   
A) -144                      B) 154                      C) 144                      D) -48  
Answer: C

161)  $-3(-3)(5)$   
A) 145                      B) 45                      C) -45                      D) 35  
Answer: B

162)  $-3(-4)(-6)$   
A) 72                      B) 28                      C) -82                      D) -72  
Answer: D

163)  $-5(-5)(-5)$   
A) -115                      B) -135                      C) -125                      D) 125  
Answer: C

164)  $-25(0)(-5)(9)$   
A) 25                      B) 0                      C) 1                      D) -25  
Answer: B

165)  $2(-1)(5)(-7)$   
A) 37                      B) 4                      C) 70                      D) -70  
Answer: C

**Evaluate the exponential expression.**

166)  $-5^3$   
A) 125                      B) -125                      C) 625                      D) -3125  
Answer: B

167)  $(-5)^5$   
A) 625                      B) 3125                      C) -3125                      D) -15,625  
Answer: C

168)  $(-4)^2$   
A) -16                      B) -4                      C) 16                      D) 4  
Answer: C

169)  $-3^4$   
A) -243                      B) 81                      C) 243                      D) -81  
Answer: D

170)  $-1^{20}$   
A) -20                      B) -1                      C) 20                      D) 1  
Answer: B

**Perform the indicated division or state that the expression is undefined.**

171)  $36 \div (-6)$   
A) -7                      B) -6                      C) -5                      D) 6  
Answer: B

- 172)  $36 \div (-6)$   
 A) -7                      B) 6                      C) -6                      D) -5  
 Answer: C
- 173)  $(-36) \div (-4)$   
 A) -9                      B) 9                      C) 10                      D) -10  
 Answer: B
- 174)  $42 \div 7$   
 A) 6                      B) -6                      C) -5                      D) 7  
 Answer: A
- 175)  $\frac{-54}{-9}$   
 A) -6                      B) 6                      C) -5                      D) -7  
 Answer: B
- 176)  $\frac{-18}{-6}$   
 A) -3                      B) -12                      C) 3                      D) 12  
 Answer: C
- 177)  $\frac{36}{-4}$   
 A) -10                      B) 10                      C) -9                      D) 9  
 Answer: C
- 178)  $-23 \div (-1)$   
 A) -23                      B) undefined                      C) -1                      D) 23  
 Answer: D
- 179)  $\frac{0}{69}$   
 A) -69                      B) undefined                      C) 0                      D) 1  
 Answer: C
- 180)  $\frac{-15}{0}$   
 A) 1                      B) -15                      C) undefined                      D) 0  
 Answer: C
- 181)  $-70 \div (-5)$   
 A) 14                      B) 4                      C) -4                      D) -14  
 Answer: A
- 182)  $-78 \div 26$   
 A) -3                      B) 3                      C) -13                      D) 13  
 Answer: A

183)  $\frac{-372}{-93}$

A) -4

B) 4

C) -6

D) 6

Answer: B

184)  $\frac{220}{-20}$

A) -11

B) 11

C) -21

D) 21

Answer: A

**Translate the sentence into a multiplication or division statement and solve.**

185) Find the product of -2 and -17.

A) -34

B) 34

C) -32

D) 32

Answer: B

186) What is -11 times 19?

A) 209

B) 198

C) -209

D) -198

Answer: C

187) What is the quotient of -81 and 9?

A) -8

B) 9

C) -10

D) -9

Answer: D

188) Divide -14 by -7.

A) 2

B) -3

C) 3

D) -2

Answer: A

**Solve the problem.**

189) The temperature in a town drops 2 degrees Fahrenheit over the last hour. If this trend continues, what is the total change in temperature over the next 7 hours? Represent the answer as an integer.

A) 14°F

B) 2°F

C) -14°F

D) -3°F

Answer: C

190) A football team lost 10 yards on each of two consecutive plays. What was the team's total change in yardage on these two plays? Represent the answer as an integer.

A) 8 yd

B) -8 yd

C) -22 yd

D) -20 yd

Answer: D

191) Over the last 5 quarters, a major corporation lost \$685 thousand. If the loss was consistent over the 5 quarters, what is the change in the corporation's value during each quarter? Represent the answer as an integer.

A) -\$139 thousand per quarter

B) -\$140 thousand per quarter

C) -\$135 thousand per quarter

D) -\$137 thousand per quarter

Answer: D

**Simplify the expression using the order of operations.**

192)  $4 \cdot 3^3$

A) 24

B) 108

C) 36

D) 1728

Answer: B

- 193)  $-9 + 8(4)$   
A) -23                      B) 4                      C) 23                      D) 41  
Answer: C
- 194)  $2 - 5 + 11$   
A) -110                      B) -53                      C) -14                      D) 8  
Answer: D
- 195)  $7 - (-3)^4$   
A) 95                      B) 88                      C) -74                      D) -67  
Answer: C
- 196)  $|-3| + 16$   
A) 13                      B) -13                      C) -19                      D) 19  
Answer: D
- 197)  $-(-2)^5$   
A) 3                      B) -32                      C) 32                      D) -10  
Answer: C
- 198)  $\frac{16 - 13}{-1}$   
A) 2                      B) -3                      C) 3                      D) 29  
Answer: B
- 199)  $\frac{-27}{-6 - 3}$   
A) 3                      B) 9                      C) -9                      D) -3  
Answer: A
- 200)  $(-4)^2 - 3^2$   
A) 7                      B) -7                      C) -14                      D) 25  
Answer: A
- 201)  $15 - (-6)^2$   
A) 27                      B) 51                      C) 21                      D) -21  
Answer: D
- 202)  $[6 + (-2)]^2$   
A) 32                      B) 40                      C) 64                      D) 16  
Answer: D
- 203)  $2 + 4(4 - 8)$   
A) 18                      B) 14                      C) -18                      D) -14  
Answer: D

- 204)  $2(-6) - (-9)$   
 A) 21                      B) -3                      C) 3                      D) 6  
 Answer: B
- 205)  $(-6)^2 - 0 \cdot 4$   
 A) -6                      B) 6                      C) 36                      D) -36  
 Answer: C
- 206)  $(6 - 9^2)^2$   
 A) -5625                      B) 144                      C) 5625                      D) -24  
 Answer: C
- 207)  $(-5 \div 5) - (7 \div 7)$   
 A) 0                      B) 1                      C) -1                      D) -2  
 Answer: D
- 208)  $2[-5 + 4(-6 + 8)]$   
 A) -2                      B) -4                      C) 6                      D) -8  
 Answer: C
- 209)  $2 - |3 - 9|^2$   
 A) -34                      B) -32                      C) -36                      D) 32  
 Answer: A
- 210)  $12^2 + 10 \cdot 6 - (11 + 2 \cdot 4)$   
 A) 201                      B) 905                      C) 185                      D) 152  
 Answer: C
- 211)  $\frac{3^2 + 9(-4)}{|5 + (-14)|}$   
 A) 4                      B) 3                      C) -19                      D) -3  
 Answer: D

**Evaluate the expression for the given value or values of the variables.**

- 212)  $17 - z^2$ ;  $z = -4$   
 A) 33                      B) 1                      C) 136                      D) 25  
 Answer: B
- 213)  $-5x^2 + 8x + 2$ ;  $x = -2$   
 A) -44                      B) -38                      C) -34                      D) -4  
 Answer: C
- 214)  $8x - 4(x + 2)$ ;  $x = -5$   
 A) -31                      B) -28                      C) -42                      D) -23  
 Answer: B

215)  $\frac{6x - 6x^2}{x^2 - 10}; x = -4$

A) 20

B) - 80

C) - 20

D) 4

Answer: C

216)  $2x^3 - 5x^2 + 12; x = -2$

A) 6

B) -36

C) -34

D) -24

Answer: D

217)  $\frac{4p}{q}; p = 56, q = 7$

A) 28

B) 192

C) 196

D) 32

Answer: D

218)  $9x^2 + 7y; x = 6, y = 5$

A) 2951

B) 267

C) 1935

D) 359

Answer: D

219)  $7x - 8y; x = 2, y = -6$

A) 64

B) 42

C) 62

D) 57

Answer: C

220)  $-|7m + 5n|; m = -4, n = 6$

A) 1

B) 3

C) -6

D) -2

Answer: D

221)  $\frac{7x + 7}{22 - 2y}; x = 9, y = 10$

A) 35

B) 32

C) 75

D) 70

Answer: A

222)  $b^2 - 4ac; a = 2, b = -6, c = 6$

A) -18

B) -22

C) -12

D) -8

Answer: C

223)  $|7a^2 - b^2| + c; a = -5, b = 0, c = 15$

A) 50

B) -190

C) 190

D) 160

Answer: C

**Determine if the given integer value for the variable is a solution to the equation.**

224)  $x + 1 = 14; 13$

A) solution

B) not a solution

Answer: A

225)  $7n = 56 - n; 7$

A) not a solution

B) solution

Answer: B



226)  $2(t - 5) = 16$ ; 11

A) not a solution

B) solution

Answer: A

227)  $6k + 4 = 3k + 31$ ; 9

A) solution

B) not a solution

Answer: A

228)  $5x + 7 = 3x + 19$ ; 6

A) solution

B) not a solution

Answer: A

229)  $6x + 3 = 4x + 18$ ; 8

A) solution

B) not a solution

Answer: B

230)  $-2(x + 9) + 4x = 4(x - 9) + 6$ ; 6

A) solution

B) not a solution

Answer: A

231)  $-2(x + 7) + 4x = 3(x - 7) + 8$ ; 3

A) not a solution

B) solution

Answer: A

**Write the English phrase as an algebraic expression. Let the variable  $x$  represent the number.**

232) six times the sum of some number and eleven

A)  $6(x - 11)$

B)  $6x + 11$

C)  $6(x + 11)$

D)  $6x - 11$

Answer: C

233) six subtracted from the quotient of ten and some number

A)  $\frac{10}{x} - 6$

B)  $6 - \frac{x}{10}$

C)  $\frac{x}{10} - 6$

D)  $6 - \frac{10}{x}$

Answer: A

234) negative four multiplied by the difference of some number and eleven

A)  $-4(11 - x)$

B)  $-4x - 11$

C)  $-4(x - 11)$

D)  $-4(n \div 11)$

Answer: C

235) Twice a number, increased by 79

A)  $2x + 79$

B)  $x + 79$

C)  $2x - 79$

D)  $2(x + 79)$

Answer: A

236) Twice a number, decreased by 54

A)  $2x + 54$

B)  $2(x - 54)$

C)  $2x - 54$

D)  $x - 54$

Answer: C

237) 8 less than 4 times a number

A)  $8 - 4x$

B)  $4x - 8$

C)  $8x - 4$

D)  $4 - 8x$

Answer: B

238) the product of four and eight more than a number

A)  $4 + 8 \cdot x$

B)  $4(x + 8)$

C)  $(4 + 8)x$

D)  $4 \cdot 8 + x$

Answer: B

239) the quotient of 39 and the product of a number and  $-4$

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

B)  $\frac{39}{x} - 4$

C)  $-156x$

D)  $\frac{39}{-4x}$

Answer: D

240) the product of 9 and a number, added to 16

A)  $9 + 16x$

B)  $16 + 9x$

C)  $144x$

D)  $144 + x$

Answer: B

241) the product of  $-18$  and the sum of a number and 29

A)  $-522x$

B)  $-18(x + 29)$

C)  $-18 + 29x$

D)  $-18x + 29$

Answer: B

242) Nine times the sum of a number and  $-26$

A)  $9x - (-26)$

B)  $9(x + (-26))$

C)  $9 + x + (-26)$

D)  $9x + (-26)$

Answer: B

243) the quotient of 37 times a number and  $-2$

A)  $\frac{37x}{-2}$

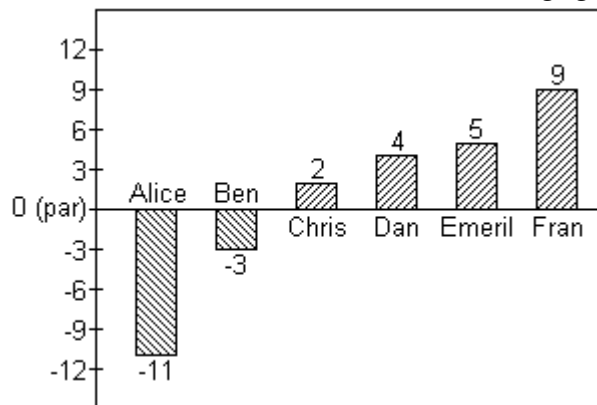
B)  $37x - 2$

C)  $37x + 2$

D)  $\frac{1}{-74x}$

Answer: A

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.



244) Find the average of the scores for Alice, Chris, Dan and Emeril. Represent the answer as an integer.

A) 6

B) 0

C)  $-6$

D)  $-3$

Answer: B

245) Find the average of the scores of the members shown. Represent the answer as an integer.

A) 0

B)  $-1$

C) 2

D) 1

Answer: D

**Solve the equation and check your proposed solution.**

246)  $a - 5 = 4$

A) -1

B) -9

C) 9

D) 1

Answer: C

247)  $z + 3 = 4$

A) 7

B) 1

C) -1

D) -7

Answer: B

248)  $9 = a + 7$

A) 16

B) -16

C) 2

D) -2

Answer: C

249)  $8 = m - 19$

A) -11

B) 11

C) -27

D) 27

Answer: D

250)  $-8 + x = 15$

A) 23

B) 7

C) -23

D) -7

Answer: A

251)  $23 = -27 + a$

A) 4

B) 50

C) -4

D) -50

Answer: B

252)  $-15 = n - 7$

A) -22

B) -8

C) 8

D) 22

Answer: B

253)  $f + 16 = -8$

A) 24

B) -8

C) -24

D) 8

Answer: C

254)  $x + 2 = 3$

A) -1

B) 1

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

D) 5

Answer: B

255)  $-29 + n = 14$

A) -43

B) -15

C) 43

D) 15

Answer: C

256)  $a - 6 = -12$

A) 18

B) -6

C) -18

D) 6

Answer: B

257)  $22 = f - 9$

A) -31

B) 31

C) 13

D) -13

Answer: B

258)  $-1 = 7 + a$

A) 6

B) -6

C) -8

D) 8

Answer: C

259)  $3x = 30$

A) 90

B) 10

C) 27

D)  $\frac{1}{10}$

Answer: B

260)  $40 = 4x$

A)  $\frac{1}{10}$

B) 10

C) 36

D) 160

Answer: B

261)  $\frac{n}{4} = 12$

A) 48

B) 16

C) 15

D) 3

Answer: A

262)  $-x = 5$

A) 5

B) -5

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

D) 6

Answer: B

263)  $\frac{n}{3} = -7$

A) -10

B) 10

C) 21

D) -21

Answer: D

264)  $-5a = 25$

A) 1

B) -30

C) -5

D) 30

Answer: C

265)  $\frac{x}{-6} = 20$

A) -26

B) -114

C) -100

D) -120

Answer: D

266)  $-49 = 7k$

A) -56

B) 56

C) 1

D) -7

Answer: D

267)  $-3x = -12$

A) 4

B) 9

C) 2

D) -9

Answer: A

268)  $\frac{n}{4} = 2$

A) 5

B) 8

C) 6

D) 0

Answer: B

269)  $2b = -24$

A) 1

B) -26

C) -12

D) 26

Answer: C

270)  $7z = -4z$

A) 1

B) -76

C) -18

D) 76

Answer: C

271)  $-112 = -8n$

A) 14

B) -104

C) 2

D) 104

Answer: A

272)  $-7s = -98$

A) 91

B) -91

C) 14

D) 2

Answer: C

273)  $\frac{p}{-3} = -5$

A) 15

B) 8

C) -15

D) -8

Answer: A

**Translate the sentence into an equation. Use  $x$  to represent the unknown number.**

274) 32 less than a number is 15.

A)  $x - 32 = 15$

B)  $15 - x = 32$

C)  $32 - x = 15$

D)  $\frac{x}{32} = 15$

Answer: A

275) The quotient of a number and 4 results in 10.

A)  $\frac{x}{4} = 10$

B)  $4x = 10$

C)  $4 - x = 10$

D)  $\frac{4}{x} = 10$

Answer: A

276) A number increased by 15 equals 26.

A)  $26x = 15$

B)  $15x = 26$

C)  $x + 15 = 26$

D)  $x + 26 = 15$

Answer: C

277) The product of 11 and a number yields 55.

A)  $x + 11 = 55$

B)  $\frac{x}{11} = 55$

C)  $55x = 11$

D)  $11x = 55$

Answer: D

Use the given information to write an equation. Let  $x$  represent the number described in the exercise. Then solve the equation and find the number.

278) seven more than a number is equal to twelve.

- A)  $7 + x = 12$ ,  $x = -5$       B)  $x = 12 + 7$ ,  $x = 19$       C)  $7 - x = 12$ ,  $x = -5$       D)  $x + 7 = 12$ ,  $x = 5$

Answer: D

279) three less than a number is fifteen.

- A)  $x = 15 - 3$ ,  $x = 12$       B)  $x - 15 = 3$ ,  $x = 12$       C)  $3 - x = 15$ ,  $x = -12$       D)  $x - 3 = 15$ ,  $x = 18$

Answer: D

280) A number increased by six is negative eleven.

- A)  $6 + x = -11$ ,  $x = 17$       B)  $x + 6 = -11$ ,  $x = -17$   
C)  $x - 11 = 6$ ,  $x = 17$       D)  $6 + x = -11$ ,  $x = -5$

Answer: B

281) The product of negative three and a number is twenty-four.

- A)  $-3x = 24$ ,  $x = -8$       B)  $-3 + x = 24$ ,  $x = 27$       C)  $-3x = 24$ ,  $x = 8$       D)  $-8x = 3$ ,  $x = 8$

Answer: A

**Perform the indicated operations.**

282)  $41 - (-44)$

- A) -85      B) 3      C) -3      D) 85

Answer: D

283)  $25 - (-13) + 14 + (-8)$

- A) 44      B) 34      C) -16      D) -34

Answer: A

284)  $2(-2)$

- A) -104      B) -4      C) -40      D) -6

Answer: B

285)  $10(-1)(3)(-2)$

- A) 9      B) -60      C) 60      D) 16

Answer: C

286)  $-36 \div 4$

- A) 9      B) -9      C) -8      D) -10

Answer: B

287)  $5 - (13 - 14)$

- A) -22      B) 4      C) -6      D) 6

Answer: D

288)  $-9(9 - 44) \div (-63)$

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

Answer: A

289)  $(15 - 10)^2 + (1 + 3)^2$

A) 135

B) 41

C) 81

D) 35

Answer: B

290)  $\frac{52(17 - 14) - 24}{3^2 - 3}$

A) 44

B) 26

C) 22

D) 27

Answer: C

**Provide an appropriate response.**

291) Insert either  $<$  or  $>$  in the blank to make a true statement:  $-41$  \_\_\_\_\_  $-80$ .

A)  $>$

B)  $<$

Answer: A

292) What is the difference in elevation between a plane flying 15,300 feet above sea level and a submarine traveling 650 feet below sea level?

A) -15,950

B) 14,650

C) -14,650

D) 15,950 feet

Answer: D

**Simplify the expression.**

293)  $|-15|$

A) -15

B) 15

C) 30

D) 0

Answer: B

294)  $-|-2|$

A) 4

B) 2

C) -2

D) 0

Answer: C

295)  $-(-3)$

A) -3

B) 6

C) 3

D) 0

Answer: C

**Provide an appropriate response.**

296) Evaluate  $9x - 4(x + 7)$  for  $x = -8$ .

A) -71

B) -63

C) -82

D) -68

Answer: D

297) Is  $-7$  a solution of  $3(x + 4) - 12 = 3x$ ?

A) solution

B) not a solution

Answer: A

**Solve the equation and check your proposed solution.**

298)  $x - 12 = 18$

A)  $\{6\}$

B)  $\{-6\}$

C)  $\{-30\}$

D)  $\{30\}$

Answer: D

299)  $-18 = -3y$

A)  $\{-15\}$

B)  $\{15\}$

C)  $\{6\}$

D)  $\{2\}$

Answer: C

300)  $-16 = y + 6$

A) {22}

B) {10}

C) {-10}

D) {-22}

Answer: D

301)  $\frac{w}{-5} = 13$

A) -65

B) 18

C) -18

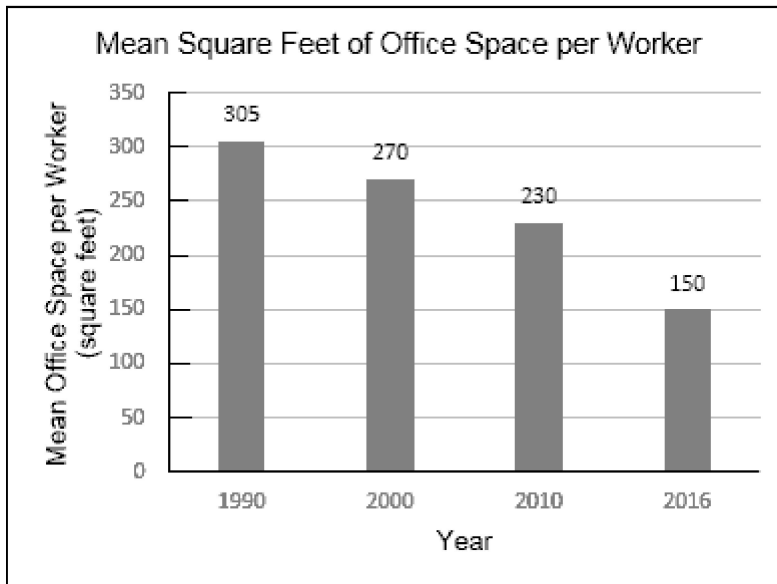
D) 65

Answer: A

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

**Provide an appropriate response.**

- 302) The bar graph shows the mean area of office space, in square feet, per worker at a certain company for four selected years.



Office area per worker,  $A$ , in square feet, can be modeled by  $A = -5x + 320$ , where  $x$  is the number of years after 1990.

a) Use the formula to find the office area per worker in 2010.

b) Does the area per worker obtained in part (a) underestimate or overestimate the area displayed by the graph? By how much?

Answer: a) 220 square feet; b) underestimates by 20 square feet