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

For the given whole number, determine the place value of the digit 3.

1) 2530
A) thousands B) ones C) tens D) hundreds
Answer: C

2) 1392
A) tens B) ones C) hundreds D) thousands
Answer: C

3) 30,542
A) thousands B) tens
C) ten-thousands D) hundred-thousands
Answer: C

4) 463,981
A) hundred-thousands B) hundreds
C) thousands D) ten-thousands
Answer: C

5) 25,304,168
A) ten-thousands B) thousands
C) hundreds D) hundred-thousands
Answer: D

6) 30,500,421
A) tens B) ten-millions C) millions D) ten-thousands
Answer: B

7) 45,271,903
A) tens B) ten-millions C) hundreds D) ones
Answer: D

8) 403,681,295
A) millions B) thousands
C) hundred-millions D) hundred-thousands
Answer: A

Fill in the digits for the given place values in the following whole number.

9) 7,645
thousands ___
tens ___
A) thousands: 6, tens: 4 B) thousands: 6, tens: 5
C) thousands: 7, tens: 4 D) thousands: 7, tens: 5
Answer: C

10) 8,384
hundreds ___
ones ___
A) hundreds: 8, ones: 4
B) hundreds: 3, ones: 4
C) hundreds: 8, ones: 3
D) hundreds: 3, ones: 8
Answer: B

11) 89,114
ten-thousands _
ones _
A) ten-thousands: 8, ones: 9
B) ten-thousands: 8, ones: 4
C) ten-thousands: 1, ones: 1
D) ten-thousands: 9, ones: 4
Answer: B

12) 89,438
ten-thousands ___
hundreds ___
A) ten-thousands: 3, hundreds 4
B) ten-thousands: 9, hundreds 8
C) ten-thousands: 8, hundreds 4
D) ten-thousands: 8, hundreds 9
Answer: C

13) 49,386
thousands ___
tens ___
A) thousands: 3, tens: 6
B) thousands: 9, tens: 8
C) thousands: 8, tens: 6
D) thousands: 9, tens: 4
Answer: B

14) 4,887,567
millions ___
thousands ___
A) millions: 4, thousands: 7
B) millions: 8, thousands: 7
C) millions: 5, thousands: 6
D) millions: 4, thousands: 8
Answer: A

15) 5,788,715
hundred-thousands ___
tens ___
A) hundred-thousands: 5, tens: 1
B) hundred-thousands: 8, tens: 7
C) hundred-thousands: 7, tens: 8
D) hundred-thousands: 7, tens: 1
Answer: D

16) 8,483,187,818
billions ___
millions ___
A) billions: 3, millions: 1
B) billions: 8, millions: 3
C) billions: 3, millions: 8
D) billions: 4, millions: 3
Answer: B

Write the whole number in word form.

17) 42

A) Fourteen two B) Four hundred two C) Forty-two D) Four two

Answer: C

18) 483

A) Four thousand, eighty-three
B) Four hundred thirty-eight
C) Four hundred eighty-three
D) Four thousand, eight hundred thirty

Answer: C

19) 3072

A) Thirty thousand, seventy-two
B) Three thousand, seventy-two
C) Three million, seventy-two
D) Three hundred thousand, seventy-two

Answer: B

20) 24,807

A) Two thousand, four hundred eighty-seven
B) Two million, forty-eight thousand, seven
C) Two hundred forty-eight thousand, seven
D) Twenty-four thousand, eight hundred seven

Answer: D

21) 72,018

A) Seventy-two hundred, eighteen
B) Seven thousand, two hundred eighteen
C) Seventy-two thousand, eighteen
D) Seventy-two thousand, one hundred eight

Answer: C

22) 128,615

A) One hundred twenty thousand, eighty-six hundred, fifteen
B) One hundred twenty-eight thousand, six hundred fifteen
C) Six hundred fifteen thousand, one hundred twenty-eight
D) One hundred twenty-eight million, six hundred fifteen

Answer: B

23) 135,060

A) Thirteen thousand, five hundred six
B) Thirteen thousand, five hundred sixty
C) One million, thirty-five thousand, sixty
D) One hundred thirty-five thousand, sixty

Answer: D

24) 9,300,695

A) Nine million, three hundred thousand, six hundred ninety-five
B) Ninety-three thousand, six hundred ninety-five
C) Nine million, three thousand, six hundred ninety-five
D) Nine million, thirty thousand, six hundred ninety-five

Answer: A

25) 64,568,009

A) Sixty-million, five thousand sixty-eight hundred, nine
B) Sixty million, forty-five thousand, sixty-eight hundred and nine
C) Sixty-four million, five hundred sixty-eight thousand, nine
D) Sixty-four million, five hundred thousand, sixty-eight hundred, nine

Answer: C

Write the whole number in standard form.

26) Five hundred thirteen
A) 5130 B) 500,013 C) 5013 D) 513
Answer: D

27) Six hundred twenty-three
A) 6023 B) 6230 C) 623 D) 600,023
Answer: C

28) Eight thousand, one hundred seventy-six
A) 800,176 B) 8076 C) 8176 D) 80,176
Answer: C

29) Three thousand, eighteen
A) 3180 B) 318,000 C) 30,018 D) 3018
Answer: D

30) Seventy-nine thousand, nine hundred three
A) 790,903 B) 79,903 C) 7993 D) 79,930
Answer: B

31) Twenty thousand, five hundred seventy-one
A) 200,571 B) 2571 C) 20,071 D) 20,571
Answer: D

32) Three hundred thirty-two thousand, nine hundred seventy-five
A) 332,975 B) 330,975 C) 303,975 D) 300,032,975
Answer: A

33) Six million, ninety-five thousand, four
A) 695,000,004 B) 6,095,400 C) 6,095,004 D) 6,950,004
Answer: C

34) 5000 + 30 + 6
A) 563 B) 5036 C) 536 D) 5360
Answer: B

35) 3000 + 100 + 20 + 4
A) 31,240 B) 3124 C) 1342 D) 428
Answer: B

36) 30,000 + 1000 + 900 + 80 + 4
A) 39,814 B) 31,984 C) 3194 D) 48,913
Answer: B

37) 40,000 + 200
A) 40,200 B) 40,020 C) 4200 D) 20,400
Answer: A

38) 8000 + 70

A) 70,800 B) 7080 C) 80,700 D) 8070

Answer: D

39) 60,000 + 300 + 10

A) 631,000 B) 6301 C) 30,160 D) 60,310

Answer: D

40) 50,000,000 + 10,000 + 9000 + 300 + 70

A) 50,109,370 B) 50,019,370 C) 5,001,937 D) 5,019,370

Answer: B

41) 600,000 + 90,000 + 400 + 4

A) 690,404 B) 69,404 C) 609,440 D) 690,440

Answer: A

Write the standard form of the whole number that is expressed in word form in the sentence.

42) The Johnsons have driven their car forty-nine thousand, eight hundred one miles in the last few years.

A) 49,810 B) 4,981 C) 49,801 D) 490,801

Answer: C

43) A certain exotic sportscar costs three hundred twelve thousand, five hundred ninety-eight dollars.

A) 31,258 B) 312,598 C) 312,598,000 D) 3,205,980

Answer: B

Write the whole number in expanded form.

44) 847

A) 700 + 40 + 8 B) 84,700 C) 8000 + 400 + 70 D) 800 + 40 + 7

Answer: D

45) 6879

A) 600 + 70 + 8 B) 9000 + 700 + 80 + 6 C) 6,879,000 D) 6000 + 800 + 70 + 9

Answer: D

46) 7040

A) 700 + 4 B) 7000 + 40 C) 704,000 D) 70,000 + 4000

Answer: B

47) 47,138

A) 4000 + 700 + 10 + 38 B) 80,000 + 3000 + 100 + 70 + 4

C) 47,138 D) 40,000 + 7000 + 100 + 30 + 8

Answer: D

48) 30,100

A) 3000 + 100 B) 3,100,000 C) 30,000 + 100 D) 30,000 + 1000

Answer: C

49) 90,380

A) 90,000 + 3000 + 80 B) 9000 + 30 + 8 C) 9000 + 300 + 8 D) 90,000 + 300 + 80

Answer: D

50) 390,506

A) 300,000 + 90,000 + 5000 + 6
B) 390,000 + 500 + 6
C) 300,000 + 90,000 + 500 + 6
D) 300,000 + 9000 + 500 + 6

Answer: C

51) 59,409,004

A) 50,000,000 + 9,000,000 + 400,000 + 900 + 4
B) 59,000,000 + 409,000 + 4
C) 50,000,000 + 900,000 + 40,000 + 9000 + 4
D) 50,000,000 + 9,000,000 + 400,000 + 9000 + 4

Answer: D

Place the correct symbol, < or >, in the blank between the whole numbers.

52) 0 ___ 44

A) >
B) <

Answer: B

53) 34 ___ 0

A) >
B) <

Answer: A

54) 38 ___ 45

A) >
B) <

Answer: B

55) 32 ___ 26

A) <
B) >

Answer: B

56) 340 ___ 300

A) <
B) >

Answer: B

57) 560 ___ 592

A) <
B) >

Answer: A

58) 522 ___ 507

A) >
B) <

Answer: A

59) 4800 ___ 4500

A) <
B) >

Answer: B

60) 6970 ___ 6704

A) <
B) >

Answer: B

61) 34,010 ___ 34,101

A) < B) >

Answer: A

62) 33,611 ___ 33,661

A) < B) >

Answer: A

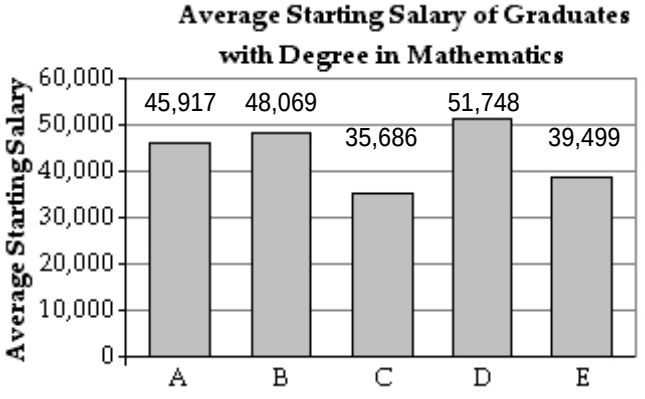
63) 431,001 ___ 430,110

A) < B) >

Answer: B

Use the bar graph to answer the question.

64) The following graph shows the average starting salary for graduates of five different schools with a degree in mathematics.

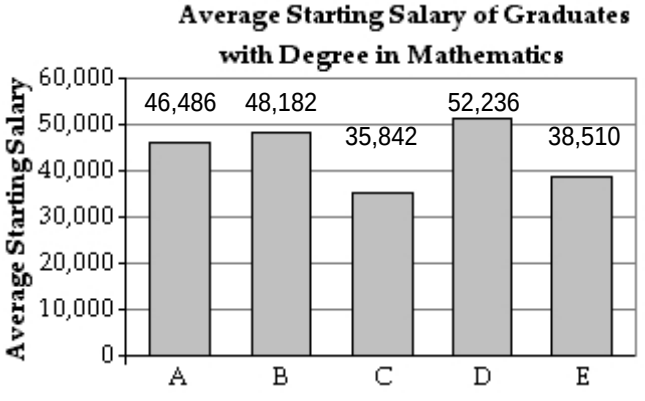


What was the greatest average starting salary among the five schools?

A) $45,917 B) $35,686 C) $48,069 D) $51,748

Answer: D

65) The following graph shows the average starting salary for graduates of five different schools with a degree in mathematics.



What was the least average starting salary among the five schools?

A) $52,236 B) $38,510 C) $46,486 D) $35,842

Answer: D

Use the line graph to answer the question.

66)

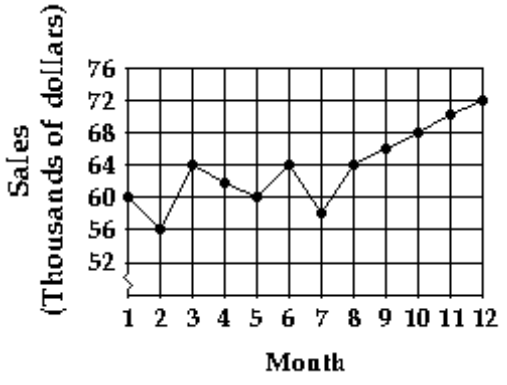
What was the total pension income in 2002?

A) $185,719 B) $185,719,000,000

C) $185,719,000,000,000 D) $185,719,000

Answer: B

67) The line graph shows the 2001 sales data for the Big "D" company.

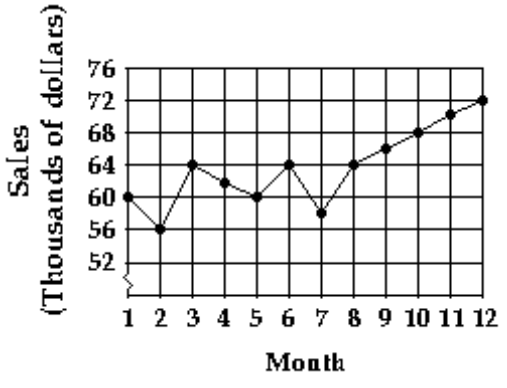


Which month had the lowest sales?

A) Month 5 B) Month 3 C) Month 2 D) Month 7

Answer: C

68) The line graph shows the 2001 sales data for the Big "D" company.



Which month had the highest sales?

A) Month 8 B) Month 6 C) Month 3 D) Month 12

Answer: D

The table shows the number of votes received by each candidate in an election along with the amount spent by the candidate on advertising. Use the table to answer the question.

Candidate	Number of Votes	Amount Spent on Advertising (in dollars)
Jose Gonzales	57,209	59,104
Angela Wong	67,108	59,024
Sue Miller	67,091	102,376
Tyler Johnson	41,036	66,514
Sandra Ouye	41,009	72,607

69) Which candidate received the most votes?
A) Jose Gonzales B) Angela Wong C) Sue Miller D) Sandra Ouye
Answer: B

70) Which candidate received the fewest votes?
A) Sandra Ouye B) Sue Miller C) Tyler Johnson D) Jose Gonzales
Answer: A

71) Which candidate spent the least on advertising?
A) Tyler Johnson B) Angela Wong C) Jose Gonzales D) Sandra Ouye
Answer: B

72) How much was spent on advertising by Tyler Johnson?
A) $41,036 B) $66,154 C) $66,514 D) $72,607
Answer: C

73) How many votes were received by Sue Miller?
A) 67,901 B) 67,091 C) 67,108 D) 102,376
Answer: B

Provide an appropriate response.

74) A local radio antenna is 1392 feet tall. Write this whole number in expanded form.
A) 1000 + 300 + 90 + 2 B) 10,000 + 3000 + 900 + 2
C) 10,000 + 300 + 90 + 2 D) 1000 + 300 + 92
Answer: A

75) There are about 2,206,019 gallons of water in the village water tower. Write this whole number in expanded form.
A) 200,000 + 20,000 + 600 + 10 + 9 B) 2,000,000 + 200,000 + 6000 + 10 + 9
C) 200,000 + 20,000 + 6000 + 10 + 9 D) 2,000,000 + 20,000 + 6000 + 10 + 9
Answer: B

76) The population of BigTown is one million, three hundred thirty-five thousand, five hundred six. Write this whole number in standard form.
A) 1,035,506 B) 133,506 C) 1,335,506 D) 13,035,560
Answer: C

77) Don figured out that he had lived two billion, five hundred eighty-two million seconds. Write this whole number in standard form.

A) 2,582,000,000 B) 2,000,582,000 C) 2,582,000 D) 2,582,000,000,000

Answer: A

78) The volume of water in the lake is seven billion, eight hundred twenty-one million, ninety-four thousand, six hundred thirteen gallons. Write this whole number in standard form.

A) 782,194,613 B) 7,821,940,613 C) 7,821,094,613 D) 7,000,821,094,613

Answer: C

79) The distance between two stars is four trillion, three hundred seventeen billion, nine hundred eighty-eight million miles. Write this whole number in standard form.

A) 4,317,988,000 B) 4,317,988,000,000,000
C) 4,317,988 D) 4,317,988,000,000

Answer: D

80) The control center was suddenly unable to track the satellite when it reached a distance of 128,615 miles from the earth's surface. Write this whole number in word form.

A) One hundred twenty thousand, eighty-six hundred, fifteen
B) One hundred twenty-eight million, six hundred fifteen
C) One hundred twenty-eight thousand, six hundred fifteen
D) Six hundred fifteen thousand, one hundred twenty-eight

Answer: C

81) The programmers were working with a graphics file of 406,581,060 bytes. Write this whole number in word form.

A) Four hundred six million, five hundred eighty-one thousand, sixty
B) Four hundred six thousand, five hundred eighty-one hundred, sixty
C) Four hundred six billion, five hundred eighty-one million, sixty
D) Four hundred sixty million, five hundred eighty-one thousand, six hundred

Answer: A

82) Astronomers predicted that it would take 900,070,000,100 earth years for the newly found supernova to make one revolution around the center of its galaxy. Write this whole number in word form.

A) Nine hundred seventy thousand, one hundred
B) Ninety billion, seven hundred million, one hundred thousand
C) Nine hundred billion, seventy million, one hundred
D) Nine hundred million, seventy thousand, one hundred

Answer: C

Add.

83) 12 + 67

A) 77 B) 88 C) 69 D) 79

Answer: D

84) 435 + 141

A) 756 B) 675 C) 927 D) 576

Answer: D

85) 439 + 4045

A) 4384 B) 3484 C) 4494 D) 4484

Answer: D

86) 2221 + 1432

A) 3346 B) 3653 C) 3644 D) 3554

Answer: B

87) 89,222 + 12,774

A) 111,996 B) 96,997 C) 101,996 D) 91,996

Answer: C

88)

$$\begin{array}{r} 5665 \\ +\ 868 \\ \hline \end{array}$$

A) 6433 B) 6523 C) 6533 D) 14,345

Answer: C

89)

$$\begin{array}{r} 1488 \\ +\ 39{,}065 \\ \hline \end{array}$$

A) 53,945 B) 40,553 C) 40,753 D) 39,553

Answer: B

90)

$$\begin{array}{r} 82{,}784 \\ +\ 38{,}706 \\ \hline \end{array}$$

A) 131,490 B) 121,490 C) 120,490 D) 120,390

Answer: B

91)

$$\begin{array}{r} 8143 \\ 9098 \\ +\ 4024 \\ \hline \end{array}$$

A) 21,055 B) 21,265 C) 20,265 D) 21,244

Answer: B

92)

$$\begin{array}{r} 97{,}951 \\ 8833 \\ +\ 21{,}684 \\ \hline \end{array}$$

A) 128,568 B) 128,468 C) 129,568 D) 127,468

Answer: B

Add mentally.

93) 0 + 6 + 7 + 4 + 0 + 1

A) 17 B) 12 C) 16 D) 18

Answer: D

94) 5 + 0 + 7 + 6 + 9 + 0 + 2

A) 31 B) 29 C) 30 D) 28

Answer: B

95) 25 + 0 + 47 + 0 + 4 + 90 + 31

A) 233 B) 220 C) 197 D) 207

Answer: C

Subtract.

96) 65 - 41

A) 106 B) 24 C) 22 D) 124

Answer: B

97) 557 - 34

A) 523 B) 515 C) 591 D) 423

Answer: A

98) 8579 - 144

A) 8427 B) 435 C) 8347 D) 8435

Answer: D

99)
$$\begin{array}{r} 5855 \\ -\ 2434 \\ \hline \end{array}$$

A) 3413 B) 5421 C) 3421 D) 3353

Answer: C

100)
$$\begin{array}{r} 8969 \\ -\ 5443 \\ \hline \end{array}$$

A) 3520 B) 3526 C) 8526 D) 3440

Answer: B

101)
$$\begin{array}{r} 79{,}777 \\ -\ 44{,}244 \\ \hline \end{array}$$

A) 35,533 B) 39,533 C) 35,445 D) 35,525

Answer: A

102) 36,657 - 18,151

A) 18,506 B) 19,906 C) 18,406 D) 18,906

Answer: A

103) 45,121 - 7869

A) 45,072 B) 37,252 C) 36,952 D) 41,252

Answer: B

104) 61,789 - 5559

A) 56,230 B) 56,530 C) 60,230 D) 64,050

Answer: A

105) 60,000 - 41,979

A) 91,979 B) 102,461 C) 21,979 D) 18,021

Answer: D

106) 844,509 - 425,768

A) 418,841 B) 418,641 C) 418,741 D) 418,731

Answer: C

107) 7711
- 396

A) 7315 B) 7293 C) 7313 D) 315

Answer: A

108) 9856
- 5374

A) 4474 B) 9482 C) 4482 D) 4374

Answer: C

109) 5169
- 4724

A) 397 B) 4445 C) 437 D) 445

Answer: D

110) 71,437
- 16,681

A) 54,756 B) 54,694 C) 60,756 D) 54,754

Answer: A

111) 45,324
- 6859

A) 38,457 B) 44,465 C) 38,417 D) 38,465

Answer: D

112)

$$\begin{array}{r} 80{,}000 \\ -\ 12{,}142 \\ \hline \end{array}$$

A) 67,858 B) 82,142 C) 88,968 D) 72,142

Answer: A

113)

$$\begin{array}{r} 913{,}859 \\ -\ 377{,}137 \\ \hline \end{array}$$

A) 536,622 B) 536,712 C) 536,822 D) 536,722

Answer: D

Translate the phrase into a mathematical expression and then find the result.

114) The sum of $83 and $45

A) 83 - 45; $57 B) 83 + 45; $128 C) 83 + 45; $124 D) 83 - 45; $38

Answer: B

115) 91 cups decreased by 26 cups

A) 91 + 26; 107 cups B) 91 - 26; 55 cups C) 91 + 26; 117 cups D) 91 - 26; 65 cups

Answer: D

116) 957 miles increased by 211 miles

A) 957 - 211; 1068 miles B) 957 + 211; 1178 miles
C) 957 + 211; 1168 miles D) 957 + 211; 1158 miles

Answer: C

117) 635 feet fewer than 1550 feet

A) 1550 - 635; 815 feet B) 635 + 1550; 2185 feet
C) 635 + 1550; 2085 feet D) 1550 - 635; 915 feet

Answer: D

118) Add 5498 cars and 5250 cars

A) 5498 - 5250; 248 cars B) 5498 + 5250; 10,250 cars
C) 5498 + 5250; 10,748 cars D) 5498 - 5250; 1167 cars

Answer: C

119) 355 gallons less than 1027 gallons

A) 355 + 1027; 1282 gallons B) 1027 - 355; 672 gallons
C) 1027 - 355; 662 gallons D) 1027 + 355; 1382 gallons

Answer: B

120) The total of 473, 840, and 862 downloads

A) 473 - 840 + 862; 1702 downloads B) 473 + 840 + 862; 2075 downloads
C) 473 + 840 - 862; 1313 downloads D) 473 + 840 + 862; 2175 downloads

Answer: D

Solve the given equation by finding the unknown value.

121) □+ 8 = 17

A) 25 B) 8 C) 9 D) 136

Answer: C

122) □- 7 = 15

A) 0 B) 8 C) 22 D) 15

Answer: C

123) 45 + 21 = □

A) 66 B) 64 C) 75 D) 56

Answer: A

124) 15 - □= 12

A) 1 B) 9 C) 3 D) 15

Answer: C

125) 232 + 114 = □

A) 643 B) 526 C) 346 D) 454

Answer: C

126) 6 + □= 19

A) 11 B) 25 C) 114 D) 13

Answer: D

127) 94 - 19 = □

A) 70 B) 85 C) 95 D) 75

Answer: D

128) 29 = 4 + □

A) 15 B) 25 C) 31 D) 35

Answer: B

129) □+ 120 = 745

A) 865 B) 625 C) 89,400 D) 635

Answer: B

130) 235 + □= 687

A) 452 B) 161,445 C) 450 D) 922

Answer: A

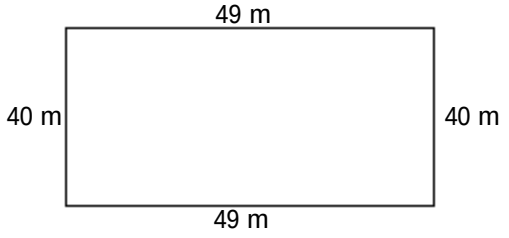
131) 733 = 190 + □

A) 549 B) 543 C) 533 D) 553

Answer: B

Find the perimeter.

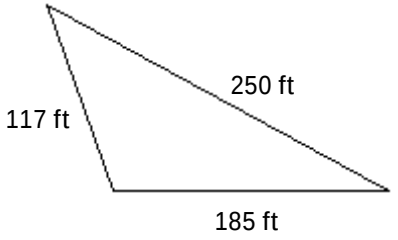
132)



A) 89 m B) 138 m C) 178 m D) 1960 m

Answer: C

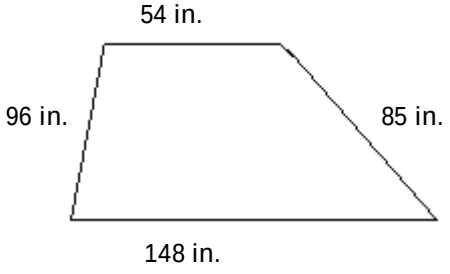
133)



A) 542 ft B) 552 ft C) 46,617 ft D) 367 ft

Answer: B

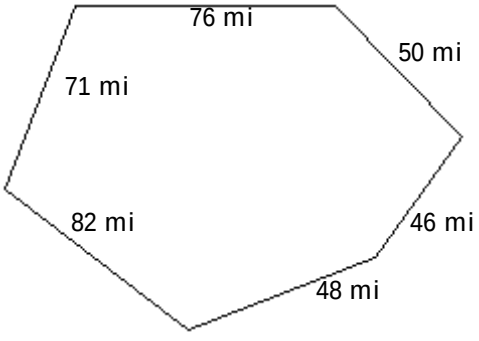
134)



A) 362 in. B) 278 in. C) 329 in. D) 383 in.

Answer: D

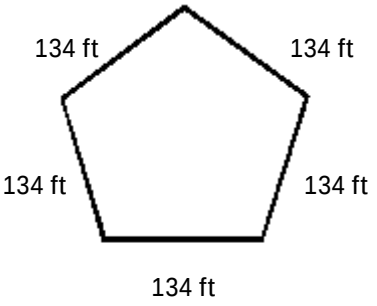
135)



A) 373 mi B) 449 mi C) 393 mi D) 302 mi

Answer: A

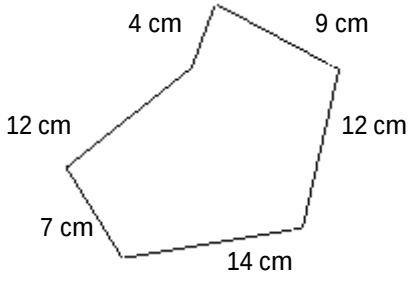
136)



A) 685 ft B) 17,956 ft C) 670 ft D) 804 ft

Answer: C

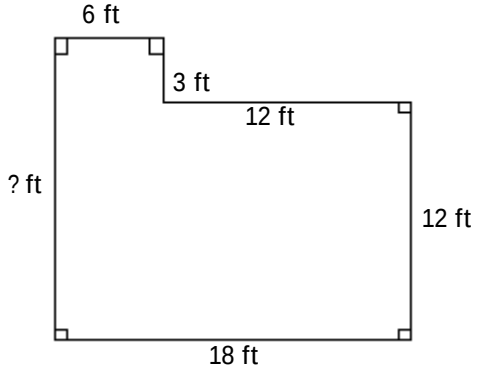
137)



A) 65 cm B) 46 cm C) 58 cm D) 50 cm

Answer: C

138)



A) 63 ft B) 118 ft

C) 66 ft D) There is not enough information given.

Answer: C

Solve the problem.

139) A pair of running shoes costs $78. A pair of basketball shoes cost $40 more than the running shoes. Find the cost of the basketball shoes.

A) $57 B) $38 C) $118 D) $114

Answer: C

140) Jim bicycled 543 miles in February. He rode 597 more miles in June than in February. How many miles did he ride in June?

A) 1150 mi B) 1140 mi C) 1130 mi D) 1040 mi

Answer: B

141) A coffee can comes packed with enough ground coffee to make 99 cups of coffee. After 45 cups have been made, how many cups of coffee can be made with the remaining ground coffee?

A) 144 cups B) 44 cups C) 134 cups D) 54 cups

Answer: D

142) On a day of trading, the Dow Jones Industrial Average increased by 573 points to close at 1629. What was the value of the Dow when trading began that day?

A) 956 points B) 1056 points C) 2202 points D) 2102 points

Answer: B

143) The height of the tallest building in the town of Chorlton is 1324 feet. It is 135 feet taller than the second tallest building. What is the height of the second tallest building in Chorlton?

A) 1459 ft B) 1458 ft C) 1189 ft D) 1188 ft

Answer: C

144) An employee was paid $12,556 during the first half of last year. During the second half she was paid $30,914. How much more was her income during the second half?

A) $18,257 B) $43,369 C) $43,470 D) $18,358

Answer: D

145) This table shows the number of lawns mowed during one week by one of the Hill Landscaping Company crews.

Day of the Week	Number of Lawns Mowed
Sunday	0
Monday	11
Tuesday	9
Wednesday	13
Thursday	10
Friday	12
Saturday	11

What is the total number of lawns mowed on Friday and Saturday?

A) 21 B) 23

C) 22 D) There is not enough information given.

Answer: B

146) This table shows the number of lawns mowed during one week by one of the Hill Landscaping Company crews.

Day of the Week	Number of Lawns Mowed
Sunday	0
Monday	10
Tuesday	8
Wednesday	12
Thursday	9
Friday	11
Saturday	10

How many more lawns were mowed on Wednesday than on Thursday?

A) 5
B) 1
C) 3
D) There is not enough information given.

Answer: C

147) Pete is driving across country from Boston to Seattle. He keeps a record of the distance that he drives each day. H much further did he drive on Monday than on Friday?

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Miles	437	348	320	285	296

A) 437 mi
B) 733 mi
C) 152 mi
D) 141 mi

Answer: D

148) During the last four months of a recent year, Annie's Natural Food Store reported the following sales. Find the difference between the sales in December and the sales in November.

Month	September	October	November	December
Sales	$3188	$3483	$2865	$4020

A) $6785
B) $6885
C) $1055
D) $1155

Answer: D

Use the distributive property to rewrite the expression. Do not find the product.

149) 4(7 + 11)

A) $4 \cdot 7 + 11$
B) $4 \cdot 7 \cdot 11$
C) $4 + 7 + 11$
D) $4 \cdot 7 + 4 \cdot 11$

Answer: D

150) 12(11 - 4)

A) $12 \cdot 11 - 12 \cdot 4$
B) $12 \cdot 11 + 4$
C) $12 - 11 + 4$
D) $12 \cdot 11 \cdot 4$

Answer: A

151) (10 + 7)5

A) $10 \cdot 5 + 7 \cdot 5$
B) $5 \cdot 10 \cdot 7$
C) $5 \cdot 10 + 7$
D) $10 + 7 + 5$

Answer: A

152) $8(1 + 8)$

A) $8 \cdot 1 \cdot 8$ B) $8 \cdot 1 + 8$ C) $8 \cdot 1 + 8 \cdot 8$ D) $8 + 1 + 8$

Answer: C

153) $6(1 - 11)$

A) $6 - 1 - 11$ B) $6 \cdot 1 - 6 \cdot 11$ C) $6 \cdot 1 \cdot 11$ D) $6 \cdot 1 - 11$

Answer: B

154) $(1 - 11)9$

A) $1 \cdot 9 - 11 \cdot 9$ B) $9 \cdot 1 + 11$ C) $1 + 11 - 9$ D) $1 \cdot 11 \cdot 9$

Answer: A

Multiply.

155) $3 \cdot 0$

A) 1 B) 12 C) 3 D) 0

Answer: D

156) $5 \cdot 4$

A) 16 B) 20 C) 9 D) 24

Answer: B

157) $(9)(5)$

A) 45 B) 14 C) 50 D) 40

Answer: A

158) 8×8

A) 56 B) 64 C) 16 D) 72

Answer: B

159) $43 \cdot 19$

A) 807 B) 817 C) 827 D) 917

Answer: B

160) $(23)(72)$

A) 1656 B) 1756 C) 1646 D) 1666

Answer: A

161) $(72)(126)$

A) 9082 B) 9072 C) 9172 D) 9062

Answer: B

162) $(714)(98)$

A) 69,972 B) 69,962 C) 69,982 D) 70,072

Answer: A

163) 437×1

A) 438 B) 0 C) 437 D) 1

Answer: C

164) 938(89)
A) 83,472 B) 83,482 C) 83,582 D) 83,492
Answer: B

165) (970)(524)
A) 508,380 B) 508,270 C) 508,280 D) 508,290
Answer: C

166) $436 \cdot 9246$
A) 4,031,256 B) 4,031,356 C) 4,030,256 D) 4,041,256
Answer: A

Multiply mentally.

167) $90 \cdot 4$
A) 360 B) 356 C) 364 D) 94
Answer: A

168) 7×40
A) 47 B) 280 C) 240 D) 320
Answer: B

169) $3 \cdot 700$
A) 703 B) 1400 C) 2800 D) 2100
Answer: D

170) $600 \cdot 6$
A) 606 B) 3606 C) 3594 D) 3600
Answer: D

171) $50 \cdot 70$
A) 3500 B) 3430 C) 3570 D) 120
Answer: A

172) 50×900
A) 45,900 B) 45,000 C) 44,100 D) 950
Answer: B

173) $700 \cdot 400$
A) 279,600 B) 280,400 C) 1100 D) 280,000
Answer: D

174) $8 \times 50 \times 10$
A) 580 B) 4000 C) 3500 D) 4500
Answer: B

175) $60 \cdot 30 \cdot 100$
A) 63,000 B) 177,000 C) 183,000 D) 180,000
Answer: D

Divide, when possible.

176) $\frac{3}{0}$

A) 0 B) 1 C) 3 D) Undefined

Answer: D

177) $8 \div 0$

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

Answer: D

178) $14 \div 14$

A) 14 B) 0 C) 1 D) Undefined

Answer: C

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

A) Undefined B) 1 C) 11 D) 0

Answer: D

180) $0 \div 3$

A) Undefined B) 3 C) 1 D) 0

Answer: D

181) $\frac{167}{167}$

A) 2 B) 167 C) 1 D) 0

Answer: C

182) $35 \div 5$

A) 6 r4 B) 6 r5 C) 8 D) 7

Answer: D

183) $\frac{30}{5}$

A) 7 B) 5 r5 C) 5 r4 D) 6

Answer: D

184) $8000 \div 10$

A) 180 B) 80 C) 800 D) 100

Answer: C

185) $996 \div 1$

A) 996 B) 0 C) Undefined D) 1

Answer: A

186) $\frac{1097}{1097}$

A) 1 B) Undefined C) 0 D) 1097

Answer: A

187) $231 \div 7$

A) 35 B) 33 C) 36 D) 31

Answer: B

188) $\frac{620}{4}$

A) 158 B) 153 C) 157 D) 155

Answer: D

189) $4177 \div 5$

A) 835 B) 835 r2 C) 835 r4 D) 837

Answer: B

190) $\frac{2914}{4}$

A) 728 r1 B) 728 r2 C) 727 r6 D) 728

Answer: B

191) $128 \div 15$

A) 9 r8 B) 8 r8 C) 8 r9 D) 7 r7

Answer: B

192) $5617 \div 41$

A) 138 r31 B) 137 r32 C) 137 D) 138

Answer: C

193) $2328 \div 50$

A) 49 r42 B) 46 r28 C) 49 r5 D) 46

Answer: B

194) $53{,}357 \div 85$

A) 62 B) 627 C) 627 R62 D) 627 r61

Answer: C

195) $\frac{74{,}499}{57}$

A) 1307 B) 1317 r18 C) 1297 D) 1312 r10

Answer: A

196) $204{,}754 \div 470$

A) 304 B) 435 r304 C) 435 D) 435 r254

Answer: B

Translate the phrase into a mathematical expression and then find the result.

197) The product of 85 yards and 6 yards

A) $85 \cdot 6$; 610 square yards B) $85 \cdot 6$; 510 square yards

C) $85 \div 6$; 480 square yards D) $85 \div 6$; 491 square yards

Answer: B

198) 482 cell phone calls times 7

A) 482 ÷ 7; 3474 cell phone calls
B) 482 · 7; 3374 cell phone calls
C) 482 ÷ 7; 3274 cell phone calls
D) 482 · 7; 3384 cell phone calls

Answer: B

199) Multiply $28 by 33

A) 28 ÷ 33; $1024
B) 28 · 33; $934
C) 28 ÷ 33; $914
D) 28 · 33; $924

Answer: D

200) 159 miles per 3 hours

A) 159 · 3; 51 miles per hour
B) 159 ÷ 3; 56 miles per hour
C) 159 ÷ 3; 53 miles per hour
D) 159 · 3; 55 miles per hour

Answer: C

201) The quotient of 49 minutes and 7

A) 49 · 7; 8 minutes
B) 49 · 7; 6 minutes
C) 49 ÷ 7; 7 minutes
D) 49 ÷ 7; 6 r7 minutes

Answer: C

202) 968 students per 22 classrooms

A) 968 ÷ 22; 45 r5 students per classroom
B) 968 · 22; 45 students per classroom
C) 968 · 22; 14 students per classroom
D) 968 ÷ 22; 44 students per classroom

Answer: D

Solve the given equation by finding the unknown value.

203) 5 · □ = 40

A) 7
B) 8
C) 40
D) 200

Answer: B

204) 3 · □ = 75

A) 25
B) 28
C) 27
D) 26

Answer: A

205) 72 ÷ □ = 4

A) 19
B) 21
C) 18
D) 20

Answer: C

206) □ · 9 = 144

A) 144
B) 1296
C) 9
D) 16

Answer: D

207) 120 ÷ □ = 8

A) 120
B) 8
C) 15
D) 960

Answer: C

208) 5 · □ = 690

A) 685
B) 3450
C) 5
D) 138

Answer: D

209) □ · 16 = 720

A) 720 B) 11,520 C) 704 D) 45

Answer: D

210) 38 · □ = 0

A) 0 B) 38 C) not possible D) 1

Answer: A

211) □ ÷ 11 = 42

A) 11 B) 462 C) 5082 D) 451

Answer: B

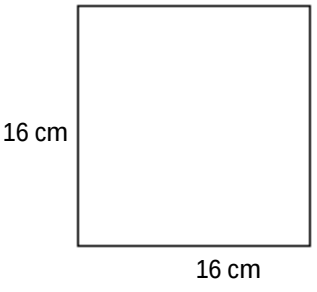
Find the area of the rectangle or square.

212)

A) 98 square feet B) 196 square feet C) 49 square feet D) 147 square feet

Answer: A

213)

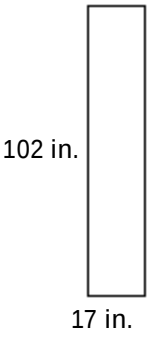


A) 64 square centimeters B) 512 square centimeters

C) 256 square centimeters D) 251 square centimeters

Answer: C

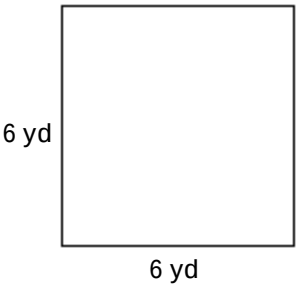
214)



A) 1734 square inches B) 1445 square inches C) 119 square inches D) 1724 square inches

Answer: A

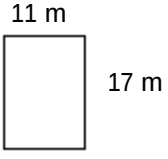
215)



A) 24 square yards B) 36 square yards C) 32 square yards D) 39 square yards

Answer: B

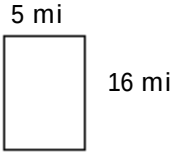
216)



A) 187 square meters B) 56 square meters C) 374 square meters D) 28 square meters

Answer: A

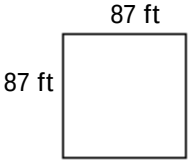
217)



A) 21 square miles B) 42 square miles C) 80 square miles D) 160 square miles

Answer: C

218)



A) 174 square feet B) 7569 square feet C) 15,138 square feet D) 348 square feet

Answer: B

Solve the problem.

219) A rectangular plot of land measures 80 feet by 130 feet. Find its area.

A) 420 sq ft B) 1040 sq ft C) 210 sq ft D) 10,400 sq ft

Answer: D

220) The floor plan of a building is a rectangle which measures 96 meters by 24 meters. Find the floor area of the building.

A) 240 sq m B) 2304 sq m C) 2314 sq m D) 2294 sq m

Answer: B

221) A mural on the wall of a building is a rectangle which measures 847 in. by 110 in. Find the area of the mural.

A) 931,700 sq in. B) 84,700 sq in. C) 93,170 sq in. D) 9317 sq in.

Answer: C

222) The textbook for a history class costs $48. There are 23 students in the class. Find the total cost of the history books for the class.

A) $71 B) $1056 C) $1104 D) $1081

Answer: C

223) The seats in the lecture hall are arranged in 13 rows with 7 seats in each row. Find how many seats are in this room.

A) 98 seats B) 91 seats C) 101 seats D) 84 seats

Answer: B

224) In a distant solar system the diameter of planet A is 7 times as great as the diameter of planet B. The diameter of planet B is 707 miles. Find the diameter of planet A.

A) 4942 mi B) 4849 mi C) 4939 mi D) 4949 mi

Answer: D

225) David's company has to ship 4950 boxes of sprinklers. If a truck can hold 550 boxes, how many truckloads does he need to ship all the boxes?

A) 9 truckloads B) 10 truckloads C) 7 truckloads D) 8 truckloads

Answer: A

226) If the area of a rectangle is 24 square miles and its length is 8 miles, what is its width?

A) 192 mi B) 64 mi C) 8 mi D) 3 mi

Answer: D

227) A spreadsheet contains 567 entries in a rectangular array which has 27 rows. How many entries are in each row?

A) 540 entries B) 31 entries C) 21 entries D) 15,309 entries

Answer: C

228) A dairy produces 330,000 quarts of milk each day. There are 4 quarts in a gallon. How many gallons of milk are produced each day?

A) 82,500 gallons of milk are produced each day.
B) 825,000 gallons of milk are produced each day.
C) 1,320,000 gallons of milk are produced each day.
D) 8250 gallons of milk are produced each day.

Answer: A

229) County records list a rectangular parcel of land as measuring 38,688 square yards. A surveyor measures the length of the parcel of land as 248 yards. What is the width of the parcel?

A) The width of the parcel is 165 yards. B) The width of the parcel is 38,440 yards.
C) The width of the parcel is 149 yards. D) The width of the parcel is 156 yards.

Answer: D

230) 344 chocolates are to be packed into boxes each of which will contain 11 chocolates. How many boxes of chocolates will there be? How many chocolates will be left over?

A) 31 boxes; no chocolates left over B) 30 boxes; 4 chocolates left over
C) 30 boxes; 3 chocolates left over D) 31 boxes; 3 chocolates left over

Answer: D

231) The following table shows the number of species listed as threatened or endangered in selected countries. Which country has 5 times as many species listed as Country B, which lists 130 species?

Country	A	B	C	D
Number of species	1321	130	650	505

A) Country A B) Country D
C) Country C D) There is not enough information given.

Answer: C

232) A rectangular plot of land needs to be fenced in. It has an area of 11,200 square feet. One side measures 70 feet . Find the length of the other side and find the total amount of fencing needed.

A) 230 ft; 460 ft B) 460 ft; 1120 ft C) 160 ft; 230 ft D) 160 ft; 460 ft

Answer: D

233) What is the maximum number of DVDs costing $18 each that a person can buy with $170? How much change will the person receive?

A) 9; $8 B) 8; $8 C) 10; $8 D) 9; $9

Answer: A

Use exponential notation to write the repeated multiplication.

234) $9 \cdot 9$

A) $2 \cdot 9$ B) 9^3 C) 2^9 D) 9^2

Answer: D

235) $8 \cdot 8 \cdot 8$

A) 8^1 B) $3 \cdot 8$ C) 8^3 D) 3^8

Answer: C

236) $9 \cdot 9 \cdot 9 \cdot 9$

A) 9^4 B) 4^9 C) 9^2 D) 36

Answer: A

237) $8 \cdot 8 \cdot 8 \cdot 8 \cdot 8$

A) 5^8 B) 8^5 C) 8^0 D) $5 \cdot 8$

Answer: B

238) $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$

A) 3^6 B) 3^5 C) 18 D) 6^3

Answer: A

239) $9 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7$

A) $1^9 \cdot 5^7$ B) $(9 \cdot 7)^5$ C) $9 \cdot 7^5$ D) 63^5

Answer: C

240) $5 \cdot 5 \cdot 9 \cdot 9 \cdot 9 \cdot 9$

A) $5^2 \cdot 9^4$ B) 45^6 C) $5 \cdot 9^6$ D) $2^5 \cdot 4^9$

Answer: A

Write the phrase in exponential notation.

241) Six cubed

A) 3^6 B) 18 C) 6^3 D) 6^2

Answer: C

242) Three to the fourth

A) 3^4 B) $3 \cdot 4$ C) 12 D) 4^3

Answer: A

Evaluate the exponential expression.

243) 5^4

A) 5 B) 625 C) 20 D) 9

Answer: B

244) 3^6

A) 729 B) 36 C) 18 D) 5

Answer: A

245) 10^7

A) 10,000,000 B) 70 C) 100,000,000 D) 1,000,000

Answer: A

246) $8 \cdot 10^2$

A) 80 B) 8 C) 80,000 D) 800

Answer: D

247) $5 \cdot 10^4$

A) 500 B) 5,000,000 C) 5000 D) 50,000

Answer: D

248) $10^5 \cdot 80$

A) 60,000,000 B) 600,000 C) 80,000 D) 8,000,000

Answer: D

249) $10^5 \cdot 8000$

A) 80,000 B) 800,000,000 C) 800,0000 D) 8,000,000

Answer: B

Rewrite the given expression using an appropriate variable. Use the first letter of the given word as the variable.

250) 6 · (Points)

A) 6 · P B) P ÷ 6 C) 6 ÷ P D) 6 + P

Answer: A

251) (Height) - 2

A) H · 2 B) H + 2 C) H ÷ 2 D) H - 2

Answer: D

252) (Rate) · 50

A) 50 ÷ R B) R ÷ 50 C) R · 50 D) R + 50

Answer: C

253) (Width) + 4

A) W + 4 B) W · 4 C) W ÷ 4 D) W - 4

Answer: A

254) 99 - (Years)

A) 99 + Y B) 99 - Y C) Y ÷ 99 D) 99 · Y

Answer: B

255) (Parts) ÷ 14

A) P ÷ 14 B) 14 ÷ P C) P + 14 D) P · 14

Answer: A

256) 3 ÷ (Length)

A) 3 - L B) L ÷ 3 C) 3 ÷ L D) 3 · L

Answer: C

Evaluate the expression for the given replacement value.

257) 51 + x, for x = 34

A) 67 B) 85 C) 58 D) 94

Answer: B

258) x - 53, for x = 95

A) 42 B) 59 C) 86 D) 77

Answer: A

259) 3x, for x = 2

A) 2 B) 23 C) 6 D) 8

Answer: C

260) 3x, for x = 1

A) 3 B) undefined C) 1 D) 0

Answer: A

261) x · 28, for x = 9

A) 352 B) 252 C) 182 D) 197

Answer: B

262) 159 ÷ x, for x = 3

A) 51 B) 56 C) 53 D) 55

Answer: C

263) $\frac{0}{x}$, for x = 280

A) 1 B) undefined C) 0 D) 280

Answer: C

264) x^4, for x = 5

A) 20 B) 625 C) 5 D) 9

Answer: B

Evaluate the expression for the given replacement values.

265) x + y, for x = 15 and y = 23

A) 47 B) 83 C) 65 D) 38

Answer: D

266) x ÷ y, for x = 480 and y = 8

A) 58 B) 62 C) 63 D) 60

Answer: D

267) x ÷ y, for x = 306 and y = 0

A) $\frac{1}{306}$ B) 0 C) 306 D) undefined

Answer: D

268) x · y, for x = 4 and y = 37

A) 148 B) 248 C) 131 D) 128

Answer: A

269) x^y, for x = 4 and y = 4

A) 256 B) 3 C) 16 D) 44

Answer: A

270) y^x, for x = 3 and y = 7

A) 10 B) 343 C) 21 D) 4

Answer: B

Use the appropriate geometric formula from the following list to find the requested measure.

Rectangle: $A = lw$, $P = 2l + 2w$

Square: $A = s^2$, $P = 4s$

Triangle: $P = a + b + c$

271) The perimeter of a rectangle with a length of 34 inches length and a width of 33 inches

A) 134 in. B) 101 in. C) 67 in. D) 1122 in.

Answer: A

272) The perimeter of a triangle with sides of length 132 feet, 189 feet, and 181 feet

A) 34,530 ft B) 321 ft C) 492 ft D) 502 ft

Answer: D

273) The perimeter of a square with side of length 5 inches

A) 21 in. B) 20 in. C) 28 in. D) 25 in.

Answer: B

274) The area of a rectangle with a length of 8 feet and a width of 4 feet

A) 16 sq ft B) 64 sq ft C) 32 sq ft D) 48 sq ft

Answer: C

275) The area of a rectangle with a length of 102 inches and a width of 17 inches

A) 1724 sq in. B) 119 sq in. C) 1445 sq in. D) 1734 sq in.

Answer: D

276) The area of a square with side of length 9 miles

A) 36 sq mi B) 77 sq mi C) 84 sq mi D) 81 sq mi

Answer: D

277) The area of two squares, each with a side measuring 12 yards

A) 288 sq yd B) 48 sq yd C) 144 sq yd D) 139 sq yd

Answer: A

Translate the word phrase into an algebraic expression. Explain what the variable represents.

278) 3 times an individual's weekly income

A) 3 + W, where W represents weekly income B) $\frac{3}{W}$, where W represents weekly income

C) 3 - W, where W represents weekly income D) 3W, where W represents weekly income

Answer: D

279) 42 fewer than the number of text messages

A) 42t, where t represents the number of text messages
B) 42 - t, where t represents the number of text messages
C) t - 42, where t represents the number of text messages
D) 42 ÷ t, where t represents the number of text messages

Answer: C

280) The difference of the number of calories and 29

A) C - 29, where C represents the number of calories
B) 29 + C, where C represents the number of calories
C) 29 - C, where C represents the number of calories
D) 29C, where C represents the number of calories

Answer: A

281) A woman's weight increased by 32

A) $\frac{32}{w}$, where w represents the woman's weight
B) w + 32, where w represents the woman's weight
C) w - 32, where w represents the woman's weight
D) 32 - w, where w represents the woman's weight

Answer: B

282) The sum of a person's income and expenses

A) I + E, where I represents income and E represents expenses
B) I · E, where I represents income and E represents expenses
C) I - E, where I represents income and E represents expenses
D) I ÷ E, where I represents income and E represents expenses

Answer: A

Determine if the given number is a solution to the given equation. Answer yes or no.

283) Is 2 a solution to p + 13 = 15?

A) yes
B) no

Answer: A

284) Is 11 a solution to p - 6 = 5 ?

A) yes
B) no

Answer: A

285) Is 20 a solution to 5n = 95?

A) yes
B) no

Answer: B

286) Is 3 a solution to 81 ÷ x = 28?

A) yes
B) no

Answer: B

287) Is 10 a solution to $x^2 = 100$?

A) yes
B) no

Answer: A

288) Is 4 a solution to $y^3 = 12$?

A) yes B) no

Answer: B

Solve the equation.

289) b + 9 = 20

A) 180 B) 11 C) 10 D) 29

Answer: B

290) x - 4 = 22

A) 104 B) 30 C) 26 D) 21

Answer: C

291) 3 + y = 30

A) 25 B) 33 C) 27 D) 90

Answer: C

292) 24 = 3 + z

A) 31 B) 11 C) 27 D) 21

Answer: D

293) 6 = 26 - x

A) 10 B) 20 C) 26 D) 30

Answer: B

294) 7x = 35

A) 35 B) 4 C) 245 D) 5

Answer: D

295) 30 ÷ d = 3

A) 9 B) 30 C) 90 D) 10

Answer: D

296) 5y = 80

A) 18 B) 16 C) 17 D) 19

Answer: B

297) 675 = 15n

A) 10,125 B) 675 C) 660 D) 45

Answer: D

298) 42 = n ÷ 11

A) 451 B) 110 C) 5082 D) 462

Answer: D

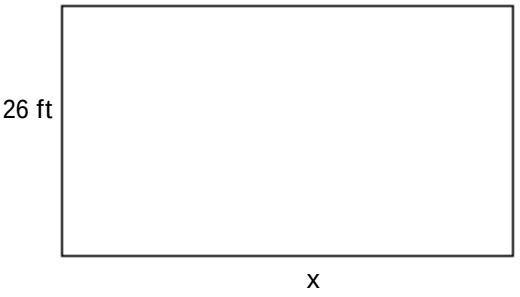
299) $a^2 = 100$

A) 121 B) 10 C) 20 D) 1024

Answer: B

Use the given information to find the unknown length represented by the variable x.

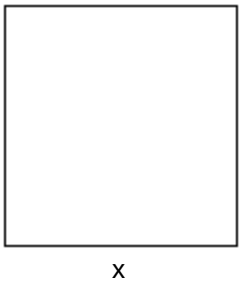
300) A rectangle with a perimeter of 258 feet



A) 2678 ft B) 103 ft C) 129 ft D) 155 ft

Answer: B

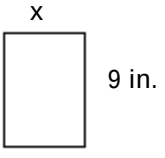
301) A square with an area of 169 square feet



A) 338 ft B) 52 ft C) 26 ft D) 13 ft

Answer: D

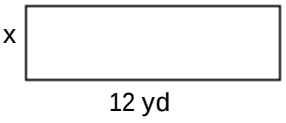
302) Rectangle with an area of 45 square inches



A) 4 in. B) 36 in. C) 5 in. D) 8 in.

Answer: C

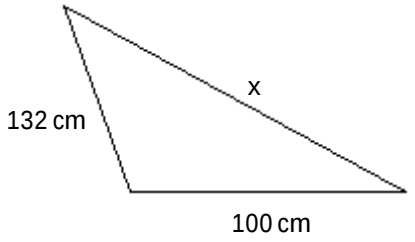
303) Rectangle with an area of 60 square yards



A) 8 yd B) 7 yd C) 5 yd D) 10 yd

Answer: C

304) Triangle with a perimeter of 452 centimeters



A) 320 cm B) 100 cm C) 220 cm D) 442 cm

Answer: C

Solve the problem.

305) From year 1 to year 2 during a scientific survey, the number of a certain species of frog increased by 8352, bringing the worldwide total to 93,003. How many frogs of that species were there in year 1 of the survey?

A) 93,203 frogs B) 84,651 frogs C) 92,003 frogs D) 168,171 frogs

Answer: B

306) The average weight of a Sample X is 15 times the average weight of a sack of Sample Y. If the average weight of Sample X is 409 pounds, find the weight of the average Sample Y.

A) 735 pounds B) 6135 pounds C) 6126 pounds D) 6144 pounds

Answer: B

307) A person has $325 in her online movie account. Find the maximum number of movie downloads costing $4 each that this person can purchase. How much is left in the account?

A) 81; $3 B) 82; $0 C) 81; $1 D) 81; $0

Answer: C

308) A student gave the same amount of money to each of 5 friends and had $7 left over. If the student originally had $52, how much was given to each friend?

A) $40 B) $9 C) $3 D) $44

Answer: B

309) Of the largest cities in a certain country, 49 are located on its east coast. If its east coast has 7 times as many large cities as the west coast, how many large cities does its west coast have?

A) 6 B) 17 C) 7 D) 343

Answer: C

310) The quotient of two numbers is 3. If the dividend is 93, what is the divisor?

A) 33 B) 31 C) 34 D) 32

Answer: B

311) The difference of two numbers is 51 . If the subtrahend is 14, what is the minuend?

A) 65 B) 74 C) 63 D) 55

Answer: A

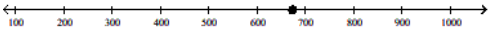
312) Each ounce of a sweetened yogurt contains 30 calories, while each ounce of a "light" version of the same yogurt contains 4 calories. Write a formula that gives the number of calories C in x ounces of sweetened yogurt. Write a formula that gives the number of calories C in y ounces of "light" yogurt. If a person eats a 10-ounce container of "light" yogurt rather than a 10-ounce container of sweetened yogurt, what is the calorie difference?

A) C = 30 ÷ x; C = 4 ÷ y; 34
B) C = 30x; C = 4y; 260
C) C = 30 + x; C = 4 + y; 340
D) C = 30x; C = 4y; 520

Answer: B

Use the given number line to round the whole number to the given place value.

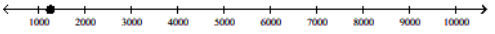
313) 673 to the nearest hundred



A) 690
B) 600
C) 800
D) 700

Answer: D

314) 1244, thousands



A) 1100
B) 2000
C) 1000
D) 900

Answer: C

Round the whole number to the given place value.

315) 35, tens

A) 50
B) 30
C) 40
D) 43

Answer: C

316) 458, tens

A) 470
B) 450
C) 560
D) 460

Answer: D

317) 697, tens

A) 710
B) 690
C) 680
D) 700

Answer: D

318) 99,996, tens

A) 100,090
B) 99,990
C) 1,000,000
D) 100,000

Answer: D

319) 4278, hundreds

A) 4200
B) 4300
C) 4400
D) 4290

Answer: B

320) 8219, thousands

A) 8000
B) 7900
C) 9000
D) 8100

Answer: A

321) 84,999, tens

A) 84,990
B) 85,000
C) 84,000
D) 84,900

Answer: B

322) 58,308, hundreds
A) 58,200 B) 58,310 C) 58,400 D) 58,300
Answer: D

323) 28,772, thousands
A) 29,000 B) 30,000 C) 28,800 D) 28,000
Answer: A

324) 97,684, ten-thousands
A) 97,700 B) 97,000 C) 98,000 D) 100,000
Answer: D

325) 947,495, hundreds
A) 947,500 B) 947,000 C) 948,000 D) 947,400
Answer: A

326) 297,499, thousands
A) 297,000 B) 298,000 C) 297,500 D) 297,400
Answer: A

327) 476,784, ten-thousands
A) 500,000 B) 470,000 C) 480,000 D) 476,000
Answer: C

328) 17,852,380, millions
A) 17,900,000 B) 18,000,000 C) 17,000,000 D) 17,852,000
Answer: B

Round the whole number to its highest place value.

329) 414
A) 410 B) 400 C) 500 D) 300
Answer: B

330) 598
A) 700 B) 500 C) 600 D) 590
Answer: C

331) 2101
A) 2100 B) 3000 C) 1900 D) 2000
Answer: D

332) 2618
A) 4000 B) 3100 C) 2890 D) 3000
Answer: D

333) 58,874
A) 58,900 B) 59,000 C) 60,000 D) 58,000
Answer: C

334) 573,899

A) 700,000 B) 590,000 C) 600,000 D) 500,000

Answer: C

335) 904,018

A) 900,000 B) 910,000 C) 1000,000 D) 800,000

Answer: A

336) 47,267,591

A) 40,000,000 B) 50,000,000 C) 47,000,000 D) 47,270,000

Answer: B

Round each number to the nearest hundred to estimate the sum or difference.

337) 265 + 135

A) 200 B) 400 C) 100 D) 130

Answer: B

338) 568 - 121

A) 500 B) 447 C) 700 D) 400

Answer: A

339) 9558 + 8858

A) 18,500 B) 18,000 C) 18,416 D) 18,400

Answer: A

340) 9578 - 2135

A) 7500 B) 7000 C) 7400 D) 7443

Answer: A

341) 5345 + 7944 + 3304

A) 16,000 B) 16,600 C) 16,500 D) 18,000

Answer: C

Round each number to its highest place value to estimate the product or quotient.

342) $23 \cdot 58$

A) 1200 B) 1800 C) 3000 D) 1000

Answer: A

343) $315 \cdot 24$

A) 6000 B) 6300 C) 7680 D) 96,000

Answer: A

344) $4073 \div 53$

A) 40 B) 60 C) 100 D) 80

Answer: D

345) $57{,}620 \div 502$

A) 120 B) 140 C) 100 D) 60

Answer: A

Compute the square root.

346) $\sqrt{81}$

A) 10 B) 8 C) 6561 D) 9

Answer: D

347) $\sqrt{576}$

A) 24 B) 288 C) 28 D) 25

Answer: A

348) $\sqrt{144}$

A) $\frac{1}{144}$ B) 20,736 C) 12 D) 144

Answer: C

349) $\sqrt{529}$

A) 24 B) 22 C) 23 D) 21

Answer: C

Approximate the square root to the nearest whole number.

350) $\sqrt{70}$

A) 8 B) 10 C) 7 D) 9

Answer: A

351) $\sqrt{936}$

A) 32 B) 31 C) 30 D) 33

Answer: B

Solve the problem by estimating.

352) Andy wants to buy a refrigerator for $899, a stove for $459, and a dishwasher for $549. Round each cost to the nearest hundred to estimate the total cost.

A) $2000 B) $1700 C) $1900 D) $1800

Answer: C

353) Linda scored 82, 75, 90, 88, 94, and 100 on her calculus tests. Round each score to the nearest ten to estimate her total score.

A) 530 B) 510 C) 520 D) 540

Answer: A

354) A local bakery sells 133 bagels on an average day. Estimate how many bagels they sold in the last 189 days. Round the number of bagels and the number of days to the nearest ten.

A) 247,000 bagels B) 24,800 bagels C) 248,000 bagels D) 24,700 bagels

Answer: D

355) Juan traveled for 6 weeks in Asia last year and spent $2357 while he was there. Estimate the average amount he spent each day. Round the number of days to the to the nearest ten and the amount of money spent to the nearest hundred.

A) $500 B) $60 C) $50 D) $600

Answer: B

356) As part of her preparation for soccer tryouts, Karen did 92 sit-ups each day for 46 days. Estimate how many sit-ups she did during that period. Round the number of sit-ups and the number of days to the to the nearest ten.

A) 13,000 leg lifts B) 1300 leg lifts C) 45,000 leg lifts D) 4500 leg lifts

Answer: D

357) The following table shows the number of Mega-Box stores in selected states. Estimate the total number of Mega-Box stores in these states by rounding each value to the nearest ten.

State	A	B	C	D	E
Number of stores	38	15	62	38	68

A) 220 stores B) 221 stores C) 200 stores D) 230 stores

Answer: D

358) The highest point in State X is at an elevation of 7276 feet and the highest point in State Y is at an elevation of 2937 feet. By rounding to the nearest hundred, estimate the difference between these two points.

A) 4339 ft B) 4300 ft C) 4000 ft D) 4400 ft

Answer: D

Evaluate the expression.

359) $5 \cdot 9 - 5$

A) 50 B) 20 C) 225 D) 40

Answer: D

360) $26 + 7 \cdot 2$

A) 66 B) 12 C) 234 D) 40

Answer: D

361) $38 - 5 \cdot 3$

A) 23 B) 53 C) 99 D) 76

Answer: A

362) $240 \div 6 - 2$

A) 232 B) 60 C) 38 D) 236

Answer: C

363) $14 \cdot 5 + 15 \cdot 17$

A) 4760 B) 3640 C) 325 D) 1445

Answer: C

364) $14 + 28 \cdot 22 - 21$

A) 609 B) 903 C) 43 D) 0

Answer: A

365) $10 + 4 \div 2 \cdot 4 - 9$

A) 9 B) 47 C) 19 D) 27

Answer: A

366) $0 \div 3 + 6 \cdot 2$

A) 15 B) 18 C) 12 D) undefined

Answer: C

367) $7^2 - 4 \cdot 5$

A) 105 B) 225 C) 29 D) 45

Answer: C

368) $48 \div 0 + 3$

A) 3 B) 16 C) 51 D) undefined

Answer: D

369) $7^2 \div 7 \cdot 5 + 1$

A) 34 B) 28 C) 36 D) 35

Answer: C

370) $(60 + 6^2) \div 3 \cdot 2^2$

A) 8 B) 108 C) 63 D) 128

Answer: D

371) $\sqrt{12 \cdot 12} - 7$

A) 151 B) 137 C) 5 D) 19

Answer: C

372) $3 \cdot (7 - 1) + \sqrt{49}$

A) 39 B) 31 C) 27 D) 25

Answer: D

373) $\sqrt{7 \cdot 9 + 1}$

A) 9 B) 7 C) 8 D) 64

Answer: C

374) $(\sqrt{19 - 3} + 4)^2$

A) 7 B) 8 C) 64 D) 49

Answer: C

375) $\dfrac{40 + 48 \div 2}{2^2}$

A) 11 B) 34 C) 16 D) 46

Answer: C

376) $\dfrac{5^2 - 2^3 + 46}{18 \div 2 \cdot 3 \cdot 1 \div 3}$

A) 21 B) 50 C) 63 D) 7

Answer: D

377) $\frac{113 + 7}{3^2 - 4}$

A) 36 B) 22 C) 24 D) 60

Answer: C

378) $\frac{30(17 - 14) - 12}{3^2 - 3}$

A) 13 B) 15 C) 16 D) 26

Answer: A

379) $23 - (7 + (9 - 3)) - (7 - 5)^3$

A) 30 B) 12 C) 18 D) 2

Answer: D

380) $3 \cdot (3 + 3)^2 - 4 \cdot (5 - 3)^2$

A) 128 B) 260 C) 416 D) 92

Answer: D

381) $310 - 3^2 \cdot 24 \div (4 \cdot 3 - 2 \cdot 2)$

A) 283 B) 598 C) 903 D) 288

Answer: A

Insert parentheses in order to make the statement true. More than one set of parentheses may be needed.

382) $2 \cdot 6 - 4 = 4$

A) $2 \cdot 6 (-4) = 4$ B) $(2)(6)(-4) = 4$ C) $2 \cdot (6 - 4) = 4$ D) $(2 \cdot 6) - 4 = 4$

Answer: C

383) $2 + 4 \cdot 9 - 4 = 30$

A) $(2 + 4) \cdot 9 - 4 = 30$ B) $2 + (4 \cdot 9) - 4 = 30$ C) $(2 + 4) \cdot (9 - 4) = 30$ D) $2 + 4 \cdot (9 - 4) = 30$

Answer: C

Evaluate the algebraic expression for the given values of the variables.

384) $m \cdot n - 6$, for $m = 2, n = 5$

A) 60 B) 2 C) 4 D) 16

Answer: C

385) $8 + x \div 5 + y$, for $x = 15, y = 10$

A) 13 B) 21 C) 12 D) 20

Answer: B

386) $x \div 6 \cdot (12 - y)$, for $x = 36, y = 2$

A) 84 B) 70 C) 60 D) 74

Answer: C

387) $9 \cdot c + 6(d + 5) + 1$, for $c = 6, d = 5$

A) 120 B) 90 C) 1081 D) 115

Answer: D

388) $r \cdot 3 + 24 \div (r - (s + 2))$, for $r = 8, s = 3$

A) 32 B) 34 C) 31 D) 33

Answer: A

389) $\sqrt{x^2} - y$, for $x = 11, y = 2$

A) 119 B) 123 C) 13 D) 9

Answer: D

390) $x\sqrt{49} - y(8 - 5)$, for $x = 8, y = 2$

A) 62 B) 82 C) 50 D) 386

Answer: C

391) $\sqrt{7 \cdot p + q}$, for $p = 9, q = 1$

A) 64 B) 9 C) 8 D) 7

Answer: C

392) $(\sqrt{a - b} + 1)^2$, for $a = 30, b = 5$

A) 100 B) 6 C) 10 D) 36

Answer: D

393) $\frac{a + 7}{b^2 - 4}$, for $a = 33, b = 3$

A) 12 B) 8 C) 20 D) 6

Answer: B

394) $\frac{x(8 - 5) - y}{3^2 - 3}$, for $x = 46, y = 6$

A) 22 B) 24 C) 44 D) 23

Answer: A

395) $x^y \cdot y^x$, for $x = 4, y = 3$

A) 35,831,808 B) 144 C) 145 D) 5184

Answer: D

Use symbols to write the expression and then evaluate it.

396) Sixteen more than two

A) $16 - 2; 14$ B) $2 \cdot 16; 32$ C) $16 + 2; 20$ D) $2 + 16; 18$

Answer: D

397) Eleven fewer than thirty-three

A) $11 \cdot 33; 363$ B) $33 - 11; 22$ C) $33 + 11; 44$ D) $11 - 33; 22$

Answer: B

398) Three squared plus nine

A) $3^2 - 9; 18$ B) $9^2 + 3; 84$ C) $3^2 + 9; 18$ D) $9^2 - 3; 78$

Answer: C

399) Seven times eleven increased by three

A) $7 \cdot (11 + 3)$; 80 B) $7 \cdot (11 + 3)$; 98 C) $7 \cdot 11 + 3$; 80 D) $7 \cdot 11 + 3$; 98

Answer: C

400) The quantity eighteen minus eight, times four

A) $18 - (8 \cdot 4)$; 40 B) $(18 + 8) \cdot 4$; 104 C) $(18 - 8) \cdot 4$; 30 D) $(18 - 8) \cdot 4$; 40

Answer: D

401) The quantity eleven plus six divided by the square root of 4

A) $(11 + 6) \cdot \sqrt{4}$; 68 B) $(11 + 6) \cdot \sqrt{4}$; 34 C) $(11 + 6) \div \sqrt{4}$; 8.5 D) $(11 + 6) \div \sqrt{4}$; 17

Answer: C

Solve the problem.

402) Vehicles in accidents often leave skid marks. To determine how fast a vehicle was traveling, officials often use a test vehicle to compare skid marks on the same section of road. If a vehicle involved in a crash left skid marks that are D feet long and a test vehicle traveling at v miles per hour leaves skid marks that are d feet long, then the speed of the vehicle in the crash is given by $V = \sqrt{\frac{v^2 D}{d}}$. Determine V if v = 50 miles per hour, D = 289 feet, and d = 100 feet.

A) 80 miles per hour B) 170 miles per hour C) 95 miles per hour D) 85 miles per hour

Answer: D

403) Suppose that an worm population, P, in thousands per acre, is given by $P = \frac{25x - 10}{x + 1}$, where x represents time in months. Find the worm population after 4 months.

A) 18 thousand per acre B) 90 thousand per acre

C) 20 thousand per acre D) 22 thousand per acre

Answer: A

404) To convert a temperature C given in degrees Celsius to an equivalent temperature F in degrees Fahrenheit, use the formula $F = \frac{9C}{5} + 32$. Find the Fahrenheit temperature that is equivalent to a temperature of 245°C.

A) 473°F B) 409°F C) 119°F D) 155°F

Answer: A

405) To convert a temperature F given in degrees Fahrenheit to an equivalent temperature C in degrees Celsius, use the formula $C = \frac{5(F - 32)}{9}$. Find the Celsius temperature that is equivalent to a temperature of 221°F.

A) 141°C B) 105°C C) 430°C D) 91°C

Answer: B

Identify the following as an equation or an expression.

406) $17 = 7y$

A) Expression B) Equation

Answer: B

407) $x + 14x - 9$

A) Equation B) Expression

Answer: B

408) $m = 12 - 7m$

A) Expression B) Equation

Answer: B

409) $19 + 8(x - 8)$

A) Equation B) Expression

Answer: B

410) $16 + 2(x - 9) = 18 - x$

A) Expression B) Equation

Answer: B

Determine whether the given terms are like or unlike.

411) $8x, 5x$

A) Unlike B) Like

Answer: B

412) $9a, 7a$

A) Unlike B) Like

Answer: B

413) $3x^2y, 13xy^2$

A) Unlike B) Like

Answer: A

414) $7ab^3, 10ab^3$

A) Like B) Unlike

Answer: A

415) $5xy, 9xy$

A) Like B) Unlike

Answer: A

416) $ab^2, 610a^2b^2$

A) Unlike B) Like

Answer: A

Combine like terms in the expression. Answer "not possible" if terms cannot be combined.

417) $3x + 12x$

A) $15x$ B) $30x$ C) $36x$ D) $15x^2$

Answer: A

418) $84x - y$

A) $24x - y$ B) $12xy$ C) not possible D) $32y$

Answer: C

419) $11yz + 7yz$

A) $18yz$ B) $36yz$ C) $77y$ D) $18y^2z$

Answer: A

420) $7x - 14xy$

A) $21x^2y$ B) $98xy$ C) $42x$ D) not possible

Answer: D

421) $90m^2n + 40m^2n$

A) $130m^2$ B) $130m^2n$ C) $36m^2n$ D) $260m^2n$

Answer: B

Simplify the expression.

422) $14b + 6b$

A) $20b^2$ B) $20b$ C) $84b$ D) $40b$

Answer: B

423) $12a + 11 + 7a$

A) $84a + 11$ B) $38a$ C) $19a + 11$ D) $19a$

Answer: C

424) $8x + 1 + 9x + 12$

A) $17x + 13$ B) $72x + 13$ C) $17x$ D) $34x$

Answer: A

425) $5(x + 4) - 20$

A) $5x + 4$ B) $20x$ C) $x + 20$ D) $5x$

Answer: D

426) $5y + 6(y - 1)$

A) $11y + 6$ B) $11y^2 - 6$ C) $30y - 6$ D) $11y - 6$

Answer: D

427) $8x + (10x + 1)$

A) $36x$ B) $80x$ C) $18x^2 + 1$ D) $18x + 1$

Answer: D

428) $2(15y + 6y)$

A) $21y^2$ B) $42y$ C) $90y$ D) $21y$

Answer: B

429) $ab + 3x + 2ab + 9x$

A) $3ab + 12x$ B) $3ab + 24x$ C) $3ab + 27$ D) $3ab + 12x^2$

Answer: A

430) $10x^2 + x + 4x^2 + 2x$

A) $40x^2 + 3x$ B) $14x^2 + 3$ C) $28x^2$ D) $14x^2 + 3x$

Answer: D

For the given equation, do the following:
(a) Simplify the expression on each side of the equal sign.
(b) See if 5 is a solution to both the given equation and the equation formed in part (a).

431) $4x + 2(x + 1) = 1 + 5x + 6$

A) (a) $6x + 1 = 5x + 7$; (b) 5 only checks in the given equation.
B) (a) $6x + 1 = 5x + 7$; (b) 5 does not check in either equation.
C) (a) $6x + 2 = 5x + 7$; (b) 5 checks in both equations.
D) (a) $6x + 1 = 5x + 6$; (b) 5 checks in both equations.

Answer: C

432) $x^2 + 4x^2 = 17x + 8x$

A) (a) $5x^2 = 30x$; (b) 5 only checks in the given equation.
B) (a) $4x^2 = 25x$; (b) 5 only checks in the given equation.
C) (a) $5x^2 = 25x$; (b) 5 checks in both equations.
D) (a) $5x^2 = 25x$; (b) 5 does not check in either equation.

Answer: C

Translate the sentence into an equation using the variable x. Do not solve the equation. State what the variable represents.

433) Twelve times the number of yards minus two times the same number of yards is 41.

A) $12x + 2x = 41$, where x is the number of yards B) $12 - 2x = 41x$, where x is the number of yards
C) $12x - 2x = 41$, where x is the number of yards D) $12 + 2x = 41x$, where x is the number of yards

Answer: C

434) The total of her age and twice her age is 90.

A) $x + 2 = 90$, where x is her age B) $x + 3x = 90$, where x is her age
C) $x + 2(90) = 90$, where x is her age D) $x + 2x = 90$, where x is her age

Answer: D

435) The product of 3 and the weight is 799.

A) $3 = 799x$, where x is the weight B) $3 + x = 799$, where x is the weight
C) $3 - x = 799$, where x is the weight D) $3x = 799$, where x is the weight

Answer: D

436) Double the total miles divided by 8 is 67.

A) $2 \div 67x = 8$, where x is the total miles B) $2x \cdot 8 = 67$, where x is the total miles
C) $2x \div 8 = 67$, where x is the total miles D) $3x \div 8 = 67$, where x is the total miles

Answer: C

Solve the problem.

437) Bob recently reduced the price of his car to $17,907. If this represents a $2171 decrease in price, what was the price before the decrease?

A) $20,078 B) $37,985 C) $36,985 D) $2071

Answer: A

438) Every hour, the population of a certain country increases by about 9584. If this country's death rate is 2997 deaths per hour, what is this country's (hourly) birth rate?

A) 6587 births per hour
B) 12,581 births per hour
C) 7506 births per hour
D) 12,083 births per hour

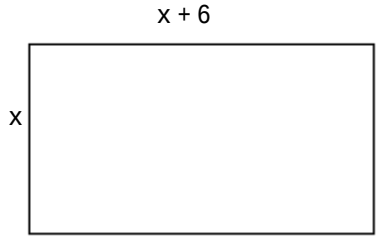
Answer: B

439) A human male's resting heart rate is 4 times that of a certain mammal's resting heart rate. If the human male's resting heart rate is 80 beats per minute, what is the mammal's resting heart rate?

A) 128 beats per minute
B) 8 beats per minute
C) 32 beats per minute
D) 20 beats per minute

Answer: D

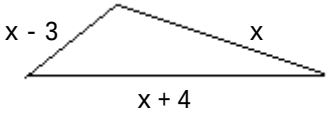
440) The rectangle in the following figure has a perimeter of 104 inches. If the length measures (x + 6) inches and the width measures x inches, find x.



A) 52 in.
B) 24 in.
C) 23 in.
D) 667 in.

Answer: C

441) The triangle in the following figure has a perimeter of 34 feet. Its sides measure (x - 3) feet, (x + 4) feet and x feet. Find x.



A) 11 ft
B) 36 ft
C) 7 ft
D) 12 ft

Answer: A

442) Five more than a number is equal to the difference of forty-one and the number. Find the number.

A) 23
B) 18
C) 15
D) 36

Answer: B

443) If a number is tripled and then added to itself, the result is the same as the number doubled plus 22. Find the number

A) 55
B) 11
C) 33
D) 22

Answer: B