

1. Determine the place value of the digit 5 in the whole number.

54,720,000

---

Choose the correct answer below.

- ☐ Ten-thousands
- ☐ Ten-millions
- ☐ Hundred-thousands
- ☐ Millions

Show your work below.

---

2. Write the whole number 92,537,926 in words.
- 

Choose the correct answer below.

- ☐ A. ninety-two million, nine hundred twenty-six million, five hundred thirty-seven
- ☐ B. ninety-two billion, five hundred thirty-seven thousand, nine hundred twenty-six
- ☐ C. ninety-two billion, five hundred thirty-seven million, nine hundred twenty-six
- ☐ D. ninety-two million, five hundred thirty-seven thousand, nine hundred twenty-six

Show your work below.

---

3. Write the number in standard form.

Seventy-four million, one hundred seventeen thousand, six

---

The number in standard form is \_\_\_\_\_.

Show your work below.

---

4. Add.

$$86,982 + 632,324$$

---

$$86,982 + 632,324 = \underline{\hspace{2cm}}$$

Show your work below.

---

5. Subtract the following. Check by adding.

$$6020 - 2968$$

---

$$6020 - 2968 = \underline{\hspace{2cm}}$$

Show your work below.

---

6. Round 398 to the nearest ten.

398 rounded to the nearest ten is           .

Show your work below.

---

7. Multiply.

$$\begin{array}{r} 37 \\ \times 49 \\ \hline \end{array}$$

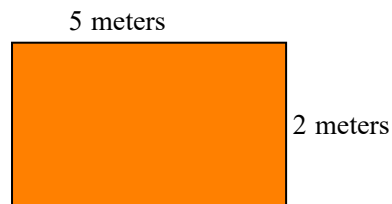
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The product is                   .

Show your work below.

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8. Find the area and the perimeter of the rectangle shown to the right.



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The area of the rectangle is \_\_\_\_\_ (1) \_\_\_\_\_

The perimeter of the rectangle is \_\_\_\_\_ (2) \_\_\_\_\_

- (1) ☐ square meters.      (2) ☐ meters.  
☐ meters.                      ☐ cubic meters.  
☐ cubic meters.                ☐ square meters.

Show your work below.

- 
9. Find the following quotient.

$$0 \div 9$$

---

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A.  $0 \div 9 =$  \_\_\_\_\_ (Simplify your answer.)  
☐ B. The quotient is undefined.

Show your work below.

---

10. Divide.

$$8 \div 0$$

---

Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A. The quotient is \_\_\_\_\_.
- ☐ B. The answer is undefined.

Show your work below.

---

11. Write using exponential notation.

$$8 \cdot 8 \cdot 8$$

---

$$8 \cdot 8 \cdot 8 = \underline{\hspace{2cm}}$$

Show your work below.

---

12. Simplify.

$$22 + 6 \cdot 9$$

---

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A.  $22 + 6 \cdot 9 =$  \_\_\_\_\_
- ☐ B. The expression is undefined.

Show your work below.

---

13. Simplify.

$$27 \div 9 \cdot 3 + 6$$

---

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A.  $27 \div 9 \cdot 3 + 6 =$  \_\_\_\_\_
- ☐ B. The expression is undefined.

Show your work below.

---

14. Evaluate the expression for  $x = 3$  and  $z = 4$ .

$$5xz - 3x$$

---

$$5xz - 3x =$$
 \_\_\_\_\_

Show your work below.

---

15. Evaluate the following expression for  $x = 1$ ,  $y = 3$ , and  $z = 3$ .

$$\frac{9xy}{z}$$

---

The answer is \_\_\_\_\_.

Show your work below.

---

16. Determine whether 5 is a solution of the equation  $7x + 7 = 40$ .

Is 5 a solution?

- ☐ Yes  
☐ No

Show your work below.

---

17. Decide whether the number is a solution of the equation.

Is 19 a solution of  $5(n - 15) = 20$ ?

- ☐ No  
☐ Yes

Show your work below.

---

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

Ten more than a number.

The translation is \_\_\_\_\_.

Show your work below.

---

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

six decreased by a number

---

The translation is \_\_\_\_\_.

Show your work below.

---

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

The product of 505 and a number.

---

The translation is \_\_\_\_\_.

Show your work below.

---

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

The quotient of four and a number.

---

The translation is \_\_\_\_\_.

Show your work below.

---

22. Insert  $<$  or  $>$  between the pair of integers to make a true statement.

$-12$        $-5$

---

$-12$       \_\_\_\_\_       $-5$

Show your work below.

---

23. Simplify.

$$|4|$$

$$|4| = \underline{\hspace{2cm}}$$

Show your work below.

---

24. Simplify.

$$|-16|$$

$$|-16| = \underline{\hspace{2cm}} \text{ (Simplify your answer.)}$$

Show your work below.

---

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

$$|-20| \quad |-14|$$

$$|-20| \underline{\hspace{2cm}} |-14|$$

Show your work below.

---

26. Add.

$$-9 + (-7)$$

$$-9 + (-7) = \underline{\hspace{2cm}}$$

Show your work below.

---



27. Add.

$$-23 + 23$$

---

$$-23 + 23 = \underline{\hspace{2cm}}$$

Show your work below.

---

28. Add.

$$-60 + 37$$

---

$$-60 + 37 = \underline{\hspace{2cm}}$$

Show your work below.

---

29. Evaluate  $3x + y$  for  $x = 2$  and  $y = -8$ .

---

The result is                     .

Show your work below.

---

30. Subtract.

$$4 - 5$$

---

$$4 - 5 = \underline{\hspace{2cm}}$$

Show your work below.

---

31. Perform the subtraction.

$$13 - (-13)$$

---

$$13 - (-13) = \underline{\hspace{2cm}}$$

Show your work below.

---

32. Subtract.

$$-6 - (-8)$$

---

$$-6 - (-8) = \underline{\hspace{2cm}}$$

Show your work below.

---

33. Subtract.

$$1 - 19$$

---

$$1 - 19 = \underline{\hspace{2cm}}$$

Show your work below.

---

34. Evaluate  $x - y$  for the given replacement values.

$$x = 3 \text{ and } y = -34$$

---

$$x - y = \underline{\hspace{2cm}}$$

Show your work below.

---

35. Multiply.

$$-2(-1)$$

$$-2(-1) = \underline{\hspace{2cm}}$$

Show your work below.

---

36. Find the quotient.

$$\frac{-80}{8}$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

☐ A.  $\frac{-80}{8} = \underline{\hspace{2cm}}$  (Simplify your answer.)

☐ B. The answer is undefined.

Show your work below.

---

37. Find the quotient.

$$\frac{-120}{-12}$$

Select the correct choice below and fill in any answer boxes in your choice.

☐ A.  $\frac{-120}{-12} = \underline{\hspace{2cm}}$

☐ B. The answer is undefined.

Show your work below.

---

38. Simplify.

$$(-9) + 8 \div 2$$

---

$$(-9) + 8 \div 2 = \underline{\hspace{2cm}}$$

Show your work below.

---

39. Simplify.

$$\frac{21 - 13}{-4}$$

---

$$\frac{21 - 13}{-4} = \underline{\hspace{2cm}}$$

Show your work below.

---

40. Evaluate the following expression for  $x = -3$ ,  $y = 3$ , and  $z = -1$ .

$$3x - 2y - 9z$$

---

$$3x - 2y - 9z = \underline{\hspace{2cm}}$$

Show your work below.

---

41. Solve. Check your solution.

$$x + 4 = 10$$

---

The solution is  $x =$  \_\_\_\_\_.

Show your work below.

---

42. Solve. Check your solution.

$$d - 5 = -24$$

---

The solution is  $d =$  \_\_\_\_\_.

Show your work below.

---

43. Solve.

$$5x = 15$$

---

The solution is  $x =$  \_\_\_\_\_.

Show your work below.

---

44. Solve.

$$-4z = 56$$

---

The solution is  $z =$  \_\_\_\_\_.

Show your work below.

---

45. Solve.

$$\frac{n}{4} = -8$$

---

The solution is  $n =$  \_\_\_\_\_.

Show your work below.

---

46. Solve.

$$\frac{x}{-3} = -7$$

---

The solution is  $x =$  \_\_\_\_\_.

Show your work below.

---

47. Simplify the expression by combining like terms.

$$5x + 2x$$

---

$$5x + 2x = \underline{\hspace{2cm}}$$

Show your work below.

---

48. Simplify the expression by combining like terms.

$$3x - 16x$$

---

$$3x - 16x = \underline{\hspace{2cm}}$$

Show your work below.

---

49. Simplify the expression by combining like terms.

$$6x + x - 9x$$

---

$$6x + x - 9x = \underline{\hspace{2cm}}$$

(Simplify your answer.)

Show your work below.

---

50. Multiply.

$$8(7x)$$

---

$$8(7x) = \underline{\hspace{2cm}}$$

Show your work below.

---

51. Multiply.

$$-2(21y)$$

---

$$-2(21y) = \underline{\hspace{2cm}} \text{ (Simplify your answer.)}$$

Show your work below.

---

52. Multiply.

$$9(q + 4)$$

---

$$9(q + 4) = \underline{\hspace{2cm}}$$

Show your work below.

---

53. Multiply.

$$4(a - 4)$$

---

$$4(a - 4) = \underline{\hspace{2cm}} \text{ (Simplify your answer.)}$$

Show your work below.

---

54. Multiply.

$$-2(5x + 2)$$

---

$$-2(5x + 2) = \underline{\hspace{2cm}}$$

Show your work below.

---



55. Simplify the expression. First use the distributive property to multiply and remove parentheses.

$$4(x + 5) - 10$$

---

$$4(x + 5) - 10 = \underline{\hspace{2cm}}$$

Show your work below.

---

56. Solve the following equation.

$$7x - 7 = 0$$

---

$$x = \underline{\hspace{2cm}}$$

Show your work below.

---

57. Solve the equation.

$$3x - 18 = 3$$

---

The solution is  $x = \underline{\hspace{2cm}}$ .

Show your work below.

---

58. Write the phrase as an algebraic expression. Use  $x$  to represent "a number."

Five added to the product of 2 and a number

---

The answer is  $\underline{\hspace{2cm}}$ .

Show your work below.

---

59. Solve the equation.

$$3 - b = 21$$

b = \_\_\_\_\_

Show your work below.

60. Identify the numerator and the denominator of the fraction and identify the fraction as proper or improper.

$$\frac{7}{2}$$

The numerator of the fraction  $\frac{7}{2}$  is \_\_\_\_\_.

The denominator of the fraction  $\frac{7}{2}$  is \_\_\_\_\_.

Is the fraction  $\frac{7}{2}$  proper or improper?

- ☐ Proper  
☐ Improper

Show your work below.

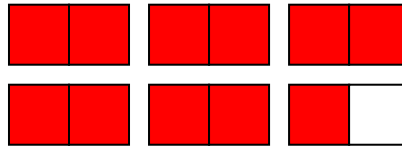
61. Write a fraction to represent the shaded region of the figure.



A fraction which represents the figure is \_\_\_\_\_.

Show your work below.

62. Represent the shaded part of the group of figures with **(a)** an improper fraction and **(b)** a mixed number.



---

a. Write the shaded area as an improper fraction.

\_\_\_\_\_

b. Write the shaded area as a mixed number.

\_\_\_\_\_

Show your work below.

- 
63. The Atlantic hurricane season of this year rewrote the record books. There were 17 tropical storms, 10 of which turned into hurricanes. What fraction of this season's Atlantic tropical storms escalated to hurricanes?

The fraction of tropical storms which escalated to hurricanes is \_\_\_\_\_.

Show your work below.

- 
64. Change the following mixed number to an improper fraction.

$$3\frac{1}{6}$$

---

$$3\frac{1}{6} = \underline{\hspace{2cm}}$$

(Type a fraction. Simplify your answer.)

Show your work below.

---

65. Write the following improper fraction as mixed number or a whole number.

$$\frac{17}{3}$$

---

$$\frac{17}{3} = \underline{\hspace{2cm}}$$

Show your work below.

---

66. Find the prime factorization of the following number.

20

---

The prime factorization of 20 is                     .

Show your work below.

---

67. Find the prime factorization of the following number.

9

---

The prime factorization of 9 is                     .

Show your work below.

---

68. Write the fraction in lowest terms.

$$\frac{9}{24}$$

$$\frac{9}{24} = \underline{\hspace{2cm}}$$

Show your work below.

---

69. Write the fraction in simplest form.

$$-\frac{63}{117}$$

$$-\frac{63}{117} = \underline{\hspace{2cm}} \text{ (Simplify your answer.)}$$

Show your work below.

---

70. Determine whether the pair of fractions is equivalent.

$$\frac{5}{15} \text{ and } \frac{3}{12}$$

Choose the correct answer below.

- ☐ The fractions are equivalent.
- ☐ The fractions are not equivalent.

Show your work below.

---

71. Multiply. Write the product in simplest form.

$$\frac{4}{11} \cdot \frac{1}{5}$$

---

$$\frac{4}{11} \cdot \frac{1}{5} = \underline{\hspace{2cm}}$$

Show your work below.

---

72. Multiply. Write the product in simplest form.

$$-\frac{3}{2} \cdot \frac{5}{9}$$

---

$$-\frac{3}{2} \cdot \frac{5}{9} = \underline{\hspace{2cm}}$$

Show your work below.

---

73. Multiply. Write the product in simplest form.

$$-\frac{5}{2} \cdot -\frac{2}{13}$$

---

$$-\frac{5}{2} \cdot -\frac{2}{13} = \underline{\hspace{2cm}} \text{ (Type an integer or a simplified fraction.)}$$

Show your work below.

---

74. Divide.

$$\frac{2}{13} \div \frac{17}{26}$$

---

Select the correct choice below and fill in any answer boxes in your choice.

- ☐ A.  $\frac{2}{13} \div \frac{17}{26} =$  \_\_\_\_\_ (Type an integer or a simplified fraction.)
- ☐ B. The answer is undefined.

Show your work below.

---

75. Divide. Write the quotient in simplest form.

$$-\frac{6}{25} \div \frac{12}{5}$$

---

$$-\frac{6}{25} \div \frac{12}{5} = \underline{\hspace{2cm}}$$

Show your work below.

---

76. Find  $\frac{3}{5}$  of 35. Write the answer in simplest form.

---

$\frac{3}{5}$  of 35 is \_\_\_\_\_. (Simplify your answer.)

Show your work below.

---

77. Add.

$$\frac{5}{7} + \frac{1}{7}$$

---

$$\frac{5}{7} + \frac{1}{7} = \underline{\hspace{2cm}} \text{ (Simplify your answer. Type an integer or a fraction.)}$$

Show your work below.

---

78. Add and simplify.

$$\frac{2}{9} + \frac{4}{9}$$

---

$$\frac{2}{9} + \frac{4}{9} = \underline{\hspace{2cm}} \text{ (Type an integer or a simplified fraction.)}$$

Show your work below.

---

79. Add and simplify.

$$-\frac{5}{18} + \left(-\frac{11}{18}\right)$$

---

$$-\frac{5}{18} + \left(-\frac{11}{18}\right) = \underline{\hspace{2cm}} \text{ (Type an integer or a simplified fraction.)}$$

Show your work below.

---



80. Subtract.

$$\frac{17}{23} - \frac{15}{23}$$

---

$$\frac{17}{23} - \frac{15}{23} = \underline{\hspace{2cm}} \text{ (Type an integer or fraction.)}$$

Show your work below.

---

81. Subtract and simplify.

$$\frac{9}{10} - \frac{7}{10}$$

---

$$\frac{9}{10} - \frac{7}{10} = \underline{\hspace{2cm}} \text{ (Type an integer or a simplified fraction.)}$$

Show your work below.

---

82. Write the fraction as an equivalent fraction with the given denominator.

$$\frac{4}{7} = \frac{\hspace{1cm}}{35}$$

---

$$\frac{4}{7} = \frac{\underline{\hspace{2cm}}}{35}$$

Show your work below.

---

83. Add and simplify.

$$\frac{1}{3} + \frac{2}{9}$$

---

$$\frac{1}{3} + \frac{2}{9} = \underline{\hspace{2cm}} \quad (\text{Type an integer or a fraction.})$$

Show your work below.

---

84. Perform the indicated operation.

$$\frac{2}{3} - \frac{1}{10}$$

---

$$\frac{2}{3} - \frac{1}{10} = \underline{\hspace{2cm}} \quad (\text{Type a whole number or a simplified fraction.})$$

Show your work below.

---

85. Add.

$$-\frac{5}{16} + \frac{5}{32}$$

---

$$-\frac{5}{16} + \frac{5}{32} = \underline{\hspace{2cm}} \quad (\text{Simplify your answer. Type an integer or a fraction.})$$

Show your work below.

---

86. Add or subtract as indicated.

$$\frac{7}{16} - \frac{7}{8}$$

---

$$\frac{7}{16} - \frac{7}{8} = \underline{\hspace{2cm}}$$

Show your work below.

---

87. Add or subtract as indicated.

$$-7 + \frac{2}{7}$$

---

$$-7 + \frac{2}{7} = \underline{\hspace{2cm}}$$

Show your work below.

---

88. Use < or > to make the statement true.

$$\frac{2}{5} ? \frac{2}{6}$$

---

$$\frac{2}{5} (1) \underline{\hspace{2cm}} \frac{2}{6}$$

(1) ☐ <  
☐ >

Show your work below.

---

89. Insert  $<$  or  $>$  to form a true sentence.

$$-\frac{7}{15} ? -\frac{5}{6}$$

$$-\frac{7}{15} (1) \underline{\hspace{2cm}} -\frac{5}{6}$$

(1) ☐  $<$

☐  $>$

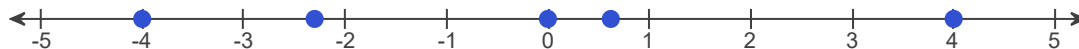
Show your work below.

90. Graph the list of numbers on a number line.

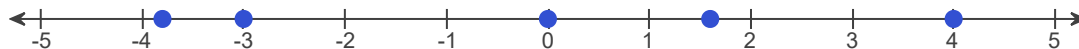
$$-4, -3\frac{3}{4}, 0, \frac{5}{8}, -\frac{1}{5}$$

Choose the correct graph below.

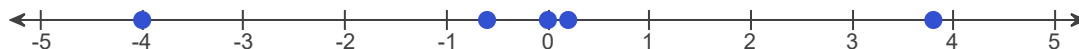
☐ A.



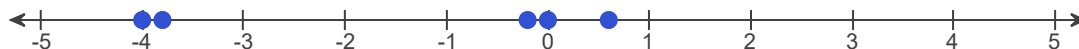
☐ B.



☐ C.



☐ D.



Show your work below.

91. Multiply.

$$3\frac{1}{6} \cdot 4\frac{3}{8}$$

---

$$3\frac{1}{6} \cdot 4\frac{3}{8} = \underline{\hspace{2cm}}$$

(Simplify your answer. Type an integer, proper fraction, or mixed number.)

Show your work below.

---

92. Divide.

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

---

$$1\frac{1}{9} \div \frac{1}{2} = \underline{\hspace{2cm}}$$

(Type an integer, proper fraction, or mixed number. Simplify your answer.)

Show your work below.

---

93. Add.

$$\begin{array}{r} 14\frac{5}{12} \\ 16 \\ + 28\frac{3}{14} \\ \hline \end{array}$$

---

The addition is                     .

(Simplify your answer. Type an integer, proper fraction, or mixed number.)

Show your work below.

---

94. Perform the indicated operation.

$$-5\frac{1}{3} \cdot \left(-2\frac{1}{2}\right)$$

---

$$-5\frac{1}{3} \cdot \left(-2\frac{1}{2}\right) = \underline{\hspace{2cm}}$$

(Simplify your answer. Type an integer, proper fraction, or mixed number.)

Show your work below.

---

95. Perform the indicated operation.

$$10\frac{7}{30} - 20\frac{5}{36}$$

---

$$10\frac{7}{30} - 20\frac{5}{36} = \underline{\hspace{2cm}} \text{ (Type an integer, proper fraction, or mixed number.)}$$

Show your work below.

---

96. Solve the equation.

$$y - \frac{7}{23} = -\frac{2}{23}$$

---

$$y = \underline{\hspace{2cm}} \text{ (Simplify your answer. Type an integer or a fraction.)}$$

Show your work below.

---

97. Write the decimal 758.002 in words.

Choose the correct answer below.

- ☐ A. Seven hundred fifty-eight and two thousandths
- ☐ B. Seven hundred fifty-eight and two hundredths
- ☐ C. Seven hundred fifty-eight and two tenths
- ☐ D. Seven hundred fifty-eight point two

Show your work below.

---

98. Write the following decimal number in standard form.

Nine and four hundredths

The number in the standard form is \_\_\_\_\_.

Show your work below.

---

99. Write the decimal as a fraction or a mixed number.

0.39

0.39 written as a fraction or mixed number is \_\_\_\_\_. (Simplify your answer.)

Show your work below.

---

100. Write the following decimal as a fraction or mixed number in lowest terms.

4.4

---

4.4 = \_\_\_\_\_

(Simplify your answer. Type an integer, proper fraction, or mixed number.)

Show your work below.

---

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

0.3      0.297

---

0.3(1) \_\_\_\_\_ 0.297

(1) ☐  $>$   
☐  $=$   
☐  $<$

Show your work below.

---

102. Round  $-0.722$  to the nearest hundredth.

---

$-0.722$  rounded to the nearest hundredth is \_\_\_\_\_.

Show your work below.

---



103. Add the following.

$$8.1 + 2.15$$

---

$$8.1 + 2.15 = \underline{\hspace{2cm}} \text{ (Type an integer or a decimal.)}$$

Show your work below.

---

104. Subtract and check the following.

$$19 - 1.9$$

---

$$19 - 1.9 = \underline{\hspace{2cm}} \text{ (Type an integer or a decimal.)}$$

Show your work below.

---

105. Subtract and check the following.

$$-3.23 - 5.3$$

---

$$-3.23 - 5.3 = \underline{\hspace{2cm}} \text{ (Type an integer or a decimal.)}$$

Show your work below.

---

106. Multiply.

$$(-1.4)(3.14)$$

---

$$(-1.4)(3.14) = \underline{\hspace{2cm}} \text{ (Type an integer or a decimal.)}$$

Show your work below.

---

107. Divide.

$$0.83 \overline{)4.731}$$

---

The quotient is \_\_\_\_\_.  
(Type an integer or a decimal.)

Show your work below.

---

108. Divide. Abbreviate any repeating decimals by placing a bar over the repetend.

$$1.548 \div 9$$

---

$1.548 \div 9 =$  \_\_\_\_\_ (Type an integer or a decimal.)

Show your work below.

---

109. Write the number as a decimal.

$$\frac{8}{25}$$

---

$$\frac{8}{25} = \underline{\hspace{2cm}}$$

Show your work below.

---

110. Write the fraction as a decimal.

$$\frac{9}{5}$$

---

$$\frac{9}{5} = \underline{\hspace{2cm}}$$

Show your work below.

---

111. Write as an equivalent decimal.

$$\frac{5}{33}$$

---

Choose the correct answer below.

- ☐  $\overline{0.15}$
- ☐ 0.152
- ☐  $0.\overline{15}$
- ☐ 0.15

Show your work below.

---

112. Insert  $<$ ,  $>$ , or  $=$  to form a true statement.

$$2.61 \quad \frac{34}{13}$$

---

$$2.61 \quad \underline{\hspace{2cm}} \quad \frac{34}{13}$$

Show your work below.

---

113. For the given set of numbers, find the mean, the median, and the mode. If necessary, round the mean to one decimal place.

0.9, 1.1, 1.2, 1.3, 1.3, 1.6, 0.9, 1.4, 1.8

---

The mean is \_\_\_\_\_. (Round to one decimal place as needed.)

The median is \_\_\_\_\_. (Round to one decimal place as needed.)

What is the mode? Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The mode is \_\_\_\_\_. (Use a comma to separate answers as needed.)
- ☐ B. There is no mode.

Show your work below.

---

114. Write the ratio as a ratio of whole numbers using fractional notation. Write the fraction in simplest form.

95 days to 35 days

---

The ratio of 95 days to 35 days is \_\_\_\_\_.  
(Type the ratio as a simplified fraction.)

Show your work below.

---

115. Write the rate as a fraction in lowest terms.

14 cups for 4 people

The rate is  $\frac{\text{_____ cups}}{\text{_____ people}}$ .

Show your work below.

---

116. Write the rate as a unit rate.

456 riders in 6 subway cars

---

The unit rate is \_\_\_\_\_ riders/car.

(Simplify your answer. Type a whole number or a decimal.)

Show your work below.

---

117. Find the unit price.

\$1.50 for 15 bananas

---

Unit price = \$ \_\_\_\_\_ per banana

Show your work below.

---

118. Determine whether the proportion is a true proportion.

$$\frac{15}{12} = \frac{5}{4}$$

---

Choose the correct answer below.

- ☐ The proportion  $\frac{15}{12} = \frac{5}{4}$  is a true proportion.
- ☐ The proportion  $\frac{15}{12} = \frac{5}{4}$  is a false proportion.

Show your work below.

---

119. Determine whether the proportion is true or false.

$$\frac{14}{3} = \frac{2}{5}$$

---

Choose the correct answer below.

- ☐ The proportion is false.
- ☐ The proportion is true.

Show your work below.

---

120. For the given proportion, find the unknown number n.

$$\frac{n}{7} = \frac{6}{14}$$

---

n = \_\_\_\_\_ (Simplify your answer.)

Show your work below.

---

121. For the given proportion, find the unknown number n.

$$\frac{30}{15} = \frac{6}{n}$$

---

n = \_\_\_\_\_ (Simplify your answer.)

Show your work below.

---

122. Nearly 4 of 5 people choose vanilla as their favorite ice cream flavor. If 130 people attend an ice cream social, how many would you expect to choose vanilla?

---

\_\_\_\_\_ people will choose vanilla ice cream.

Show your work below.

- 
123. Write the percent as a decimal.

39%

---

39% = \_\_\_\_\_

Show your work below.

- 
124. Write the percent as a fraction or mixed number in simplest form.

14%

---

14% = \_\_\_\_\_

Show your work below.

- 
125. Write the decimal as a percent.

0.27

---

0.27 = \_\_\_\_\_ % (Simplify your answer. Type an integer or a decimal.)

Show your work below.

---

126. Write the fraction as a percent.

$$\frac{11}{25}$$

---

$$\frac{11}{25} = \underline{\hspace{2cm}} \% \text{ (Simplify your answer.)}$$

Show your work below.

---

127. Write the mixed number as a percent.

$$8\frac{1}{2}$$

---

$$8\frac{1}{2} = \underline{\hspace{2cm}} \%$$

Show your work below.

---

128. Solve the following equation.

18 is what percent of 20?

---

                     % (Type an integer or a decimal.)

Show your work below.

---



129. What number is 61% of 50?

\_\_\_\_\_ is 61% of 50.

Show your work below.

130. 35% of what number is 70?

The answer is \_\_\_\_\_.

(Type an integer or a decimal rounded to the nearest tenth.)

Show your work below.

131. The line graph shows the average number of goals per World Cup game during the years shown. Between 1998 and 2002, did the average number of goals per game increase or decrease?

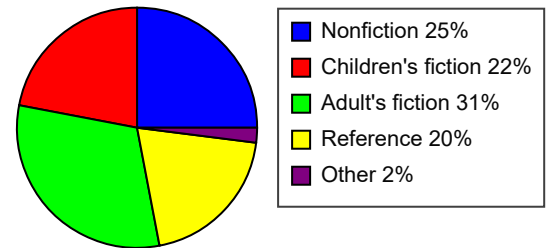


Between 1998 and 2002 the average number of goals

- ☐ Increased
- ☐ Decreased

Show your work below.

132. The circle graph shows the percent of the types of books available at a library. What is the second-largest category of books?



Choose the correct answer below.

- ☐ A. Children's fiction
- ☐ B. Other
- ☐ C. Adult's fiction
- ☐ D. Reference
- ☐ E. Nonfiction

Show your work below.

133. A Prealgebra class is instructed to plot the point  $(-1, 3)$  on a rectangular coordinate system. Which of the following procedures will correctly determine the location of this point?

Choose the correct answer below.

- ☐ A. Choose a place to start. Move one space left and then move three spaces up. Mark the point.
- ☐ B. Starting at the origin, move one space right and then move three spaces up. Mark the point.
- ☐ C. Starting at the origin, move one space down and then three spaces right. Mark the point.
- ☐ D. Starting at the origin, move one space left, and then move three spaces up. Mark the point.

Show your work below.

134. If a single 6-sided die is tossed once, find the probability of rolling a 2.

The probability is \_\_\_\_\_. (Type a whole number or a simplified fraction.)

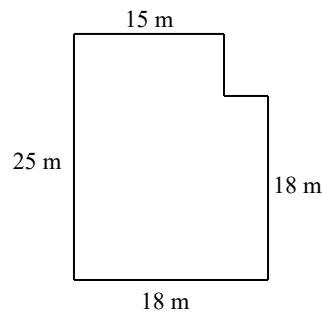
Show your work below.

135. Find the measure of the complement of a  $34^\circ$  angle.

The measure of the complement of a  $34^\circ$  angle is \_\_\_\_\_ $^\circ$ .  
(Simplify your answer. Type an integer or a decimal.)

Show your work below.

136. Find the perimeter of the figure shown to the right.

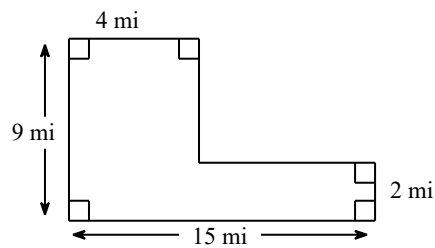


The perimeter of the figure is \_\_\_\_\_ (1) \_\_\_\_\_

- (1) ☐ square meters.  
☐ meters.

Show your work below.

137. Find the area of the given geometric figure.

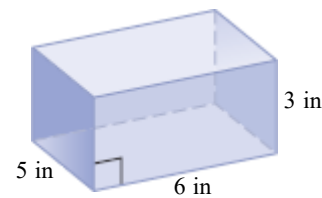


The area of the figure is \_\_\_\_\_ (1) \_\_\_\_\_  
(Simplify your answer.)

- (1) ☐ sq mi.  
☐ mi.  
☐ cu mi.

Show your work below.

138. Find the volume and the surface area of the solid.



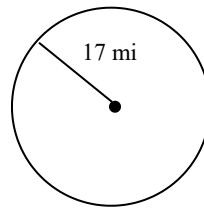
The volume is \_\_\_\_\_ (1) \_\_\_\_\_. (Simplify your answer.)

The surface area is \_\_\_\_\_ (2) \_\_\_\_\_. (Simplify your answer.)

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| (1) <input type="radio"/> inches    | (2) <input type="radio"/> inches    |
| <input type="radio"/> square inches | <input type="radio"/> square inches |
| <input type="radio"/> cubic inches  | <input type="radio"/> cubic inches  |

Show your work below.

139. Find the circumference of the circle. Give the exact circumference and then an approximation. Use  $\pi \approx 3.14$ .



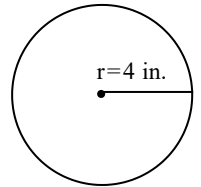
The exact circumference of the circle is \_\_\_\_\_ (1) \_\_\_\_\_  
(Simplify your answer. Type an exact answer in terms of  $\pi$ .)

The approximate circumference of the circle is \_\_\_\_\_ (2) \_\_\_\_\_  
(Type an integer or a decimal rounded to the nearest hundredth.)

- (1) ☐ square miles.      (2) ☐ miles.  
     ☐ miles.                      ☐ square miles.

Show your work below.

140. Find the area of the given geometric figure. If the figure is a circle, give an exact area and then use  $\frac{22}{7}$  as an approximation for  $\pi$  to approximate the area.



The exact area of the circle is \_\_\_\_\_ (1) \_\_\_\_\_  
(Simplify your answer. Type an exact answer in terms of  $\pi$ .)

The approximate area is \_\_\_\_\_ (2) \_\_\_\_\_  
(Simplify your answer. Type an integer, proper fraction, or a mixed number.)

- (1) ☐ sq in.      (2) ☐ sq in.  
     ☐ in.                      ☐ in.  
     ☐ cu in.                      ☐ cu in.

Show your work below.

1. Ten-millions

---

2. D. ninety-two million, five hundred thirty-seven thousand, nine hundred twenty-six

---

3. 74,117,006

---

4. 719,306

---

5. 3052

---

6. 400

---

7. 1813

---

8. 10

(1) square meters.

14

(2) meters.

---

9. A.  $0 \div 9 =$  0 (Simplify your answer.)

---

10. B. The answer is undefined.

---

11.  $8^3$

---

12. A.  $22 + 6 \cdot 9 =$  76

---

13. A.  $27 \div 9 \cdot 3 + 6 =$  15

---

14. 51

---

15. 9

---

16. No

---

17. Yes

---

18.  $x + 10$

---

19.  $6 - x$

---

20.  $505x$

---

21.  $\frac{4}{x}$

---

22.  $<$

---

23.  $4$

---

24.  $16$

---

25.  $>$

---

26.  $-16$

---

27.  $0$

---

28.  $-23$

---

29.  $-2$

---

30.  $-1$

---

31.  $26$

---

32.  $2$

---

33.  $-18$

---

34.  $37$

---

35.  $2$

---

36. A.  $\frac{-80}{8} =$      **- 10**     (Simplify your answer.)

---

37. A.  $\frac{-120}{-12} =$      **10**    

---

38.  $-5$

---

39.  $-2$

---

40.  $-6$

---

41.  $6$

---

42.  $-19$

---

43.  $3$

---

44.  $-14$

---

45.  $-32$

---

46.  $21$

---

47.  $7x$

---

48.  $-13x$

---

49.  $-2x$

---

50.  $56x$

---

51.  $-42y$

---

52.  $9q + 36$

---

53.  $4a - 16$

---



54.  $-10x - 4$

---

55.  $4x + 10$

---

56.  $1$

---

57.  $7$

---

58.  $2x + 5$

---

59.  $-18$

---

60.  $7\frac{2}{2}$   
Improper

---

61.  $\frac{1}{7}$

---

62.  $\frac{11}{2}$   
 $5\frac{1}{2}$

---

63.  $\frac{10}{17}$

---

64.  $\frac{19}{6}$

---

65.  $5\frac{2}{3}$

---

66.  $2^2 \cdot 5$

---

67.  $3^2$

---

68.  $\frac{3}{8}$

---

69.  $-\frac{7}{13}$

---

70. The fractions are not equivalent.

---

71.  $\frac{4}{55}$

---

72.  $-\frac{5}{6}$

---

73.  $\frac{5}{13}$

---

74. A.  $\frac{2}{13} \div \frac{17}{26} = \underline{\frac{4}{17}}$  (Type an integer or a simplified fraction.)

---

75.  $-\frac{1}{10}$

---

76. 21

---

77.  $\frac{6}{7}$

---

78.  $\frac{2}{3}$

---

79.  $-\frac{8}{9}$

---

80.  $\frac{2}{23}$

---

81.  $\frac{1}{5}$

---

82. 20

---

83.  $\frac{5}{9}$

---

84.  $\frac{17}{30}$

---

85.  $-\frac{5}{32}$

---

86.  $-\frac{7}{16}$

---

87.  $-\frac{47}{7}$

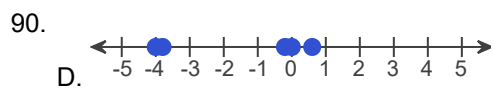
---

88. (1) >

---

89. (1) >

---



91.  $13\frac{41}{48}$

---

92.  $2\frac{2}{9}$

---

93.  $58\frac{53}{84}$

---

94.  $13\frac{1}{3}$

---

95.  $-9\frac{163}{180}$

---

96.  $\frac{5}{23}$

---

97. A. Seven hundred fifty-eight and two thousandths

---

98. 9.04

---

99.  $\frac{39}{100}$

---

100.  $4\frac{2}{5}$

---

101. (1) >

---

102. - 0.72

---

103. 10.25

---

104. 17.1

---

105. - 8.53

---

106. - 4.396

---

107. 5.7

---

108. 0.172

---

109. 0.32

---

110. 1.8

---

111.  $0.\overline{15}$

---

112. <

---

113. 1.3

1.3

A. The mode is 0.9,1.3. (Use a comma to separate answers as needed.)

---

114.  $\frac{19}{7}$

---

115. 7  
2

---

116. 76

---

117. 0.10

---

118. The proportion  $\frac{15}{12} = \frac{5}{4}$  is a true proportion.

---

119. The proportion is false.

---

120. 3

---

121. 3

---

122. 104

---

123. 0.39

---

124.  $\frac{7}{50}$

---

125. 27

---

126. 44

---

127. 850

---

128. 90

---

129. 30.5

---

130. 200

---

131. Decreased

---

132. E. Nonfiction

---

133. D. Starting at the origin, move one space left, and then move three spaces up. Mark the point.

---

134.  $\frac{1}{6}$

---

135. 56

---

136. 86  
(1) meters.

---

137. 58  
(1) sq mi.

---

138. 90  
(1) cubic inches  
126  
(2) square inches

---

139.  $34\pi$   
(1) miles.  
106.76  
(2) miles.

---

140.  $16\pi$   
(1) sq in.  
 $50\frac{2}{7}$   
(2) sq in.

---