Summer Math Practice Assignment	**Name:**
Preparing for Algebra I (Review of Introduction to Algebra)	**Due Date:** First Day of School

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

   91,530,000

   Choose the correct answer below.

   - ○ Ten-thousands
   - ○ Hundred-thousands
   - ○ Millions
   - ○ Ten-millions

   Show your work below.

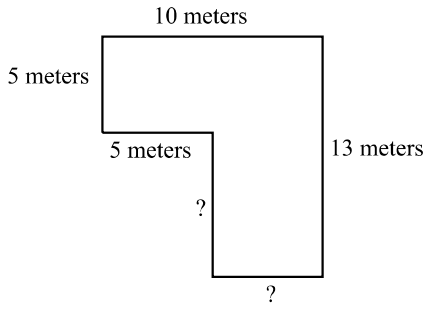
2. Write the whole number in standard form.

   seven million, one hundred six

   The number in standard form is ____.

   Show your work below.

3. Find the perimeter of the figure.



The perimeter is ☐ (1) _____
(Type a whole number.)

(1) ○ cubic meters.
○ square meters.
○ meters.

Show your work below.

4. Complete the table by estimating the given number to the given place value.

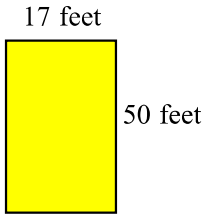
	Tens	Hundreds	Thousands
2444			

Complete the table below.

	Tens	Hundreds	Thousands
2444			

Show your work below.

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



The area of the rectangle is ☐ (1) _____

The perimeter of the rectangle is ☐ (2) _____

(1) ○ cubic feet. ○ feet. ○ square feet.

(2) ○ cubic feet. ○ square feet. ○ feet.

Show your work below.

6. Find the following quotient.

$0 \div 8$

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

○ **A.** $0 \div 8 =$ ☐ (Simplify your answer.)

○ **B.** The quotient is undefined.

Show your work below.

7. 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.

8. Find the average value of the following list of numbers.

20, 22, 41, 24, 18, 13

The average value is ☐.

Show your work below.

9. Write using exponential notation.

$7 \cdot 7 \cdot 9 \cdot 9 \cdot 9 \cdot 9$

$7 \cdot 7 \cdot 9 \cdot 9 \cdot 9 \cdot 9 =$ ☐

Show your work below.

10. Evaluate 9^4.

$9^4 =$ ☐

Show your work below.

11. Simplify.

$50 + 9 \cdot 6$

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

- ○ **A.** $50 + 9 \cdot 6 =$ ☐
- ○ **B.** The expression is undefined.

Show your work below.

12. Simplify.

$8 \div 2 \cdot 4 + 5$

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

- ○ **A.** $8 \div 2 \cdot 4 + 5 =$ ☐
- ○ **B.** The expression is undefined.

Show your work below.

13. Simplify.

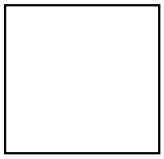
$5^2 \cdot (8-6) + 3^3 + 3^2$

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

- **A.** $5^2 \cdot (8-6) + 3^3 + 3^2 =$ ☐
- **B.** The expression is undefined.

Show your work below.

14. Find the area and perimeter of the square shown to the right.



The area of the square is ☐ (1) _____

The perimeter of the square is ☐ (2) _____

(1) square meters. meters.

(2) square meters. meters.

Show your work below.

15. Evaluate the expression for $x = 5$ and $z = 4$.

$2xz - 5x$

$2xz - 5x =$ ☐

Show your work below.

16. Evaluate the expression for $x = 3$ and $y = 4$.

$$\frac{3y - 3}{x}$$

$\frac{3y - 3}{x} =$ [ ]

Show your work below.

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

Is 7 a solution?

- Yes
- No

Show your work below.

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

Is 15 a solution of $2(n - 13) = 4$?

- Yes
- No

Show your work below.

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

The quotient of three and a number.

The translation is [ ].

Show your work below.

---

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

the product of fifteen and a number

The product of fifteen and a number is [ ].

Show your work below.

---

21. Represent the quantity by an integer.

The bottom of a deep trench in an ocean is estimated to be 12,764 feet below sea level.

The corresponding integer is [ ].

Show your work below.

---

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

-14 -1

-14 [ ] -1

Show your work below.

23. Simplify.

$|-7|$

$|-7| =$ ☐ (Simplify your answer.)

Show your work below.

---

24. Simplify.

$-|66|$

$-|66| =$ ☐

Show your work below.

---

25. Add.

$5+(-2)$

$5+(-2) =$ ☐

Show your work below.

---

26. Add.

$-6+(-10)$

$-6+(-10) =$ ☐

Show your work below.

---

27. Add.

$-70+26$

$-70+26=$ ☐

Show your work below.

28. Subtract.

$8-9$

$8-9=$ ☐

Show your work below.

29. Subtract.

$-3-(-5)$

$-3-(-5)=$ ☐

Show your work below.

30. Perform the subtraction.

$-14-22$

$-14-22=$ ☐

Show your work below.

31. Subtract.

$5 - 19$

$5 - 19 =$ ☐

Show your work below.

32. Subtract.

$-4 - 6$

$-4 - 6 =$ ☐

Show your work below.

33.

negative	positive	undefined	0

Drag the correct choices above into the area with the appropriate definition. Each choice may be used more than once.

The product of a negative number and a positive number is a(n) [ ] number.

The product of two negative numbers is a(n) [ ] number.

The quotient of two negative numbers is a(n) [ ] number.

The quotient of a negative number and a positive number is a(n) [ ] number.

The product of a negative number and zero is [ ].

The quotient of 0 and a negative number is [ ].

The quotient of a negative number and 0 is [ ].

Show your work below.

---

34. Multiply.

$-2(9)$

$-2(9) =$ [ ]

Show your work below.

---

35. Evaluate.

-2^2

$-2^2 =$ ☐

Show your work below.

36. Evaluate.

$(-10)^2$

$(-10)^2 =$ ☐

Show your work below.

37. Find the quotient.

$$\frac{-22}{-11}$$

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

- **A.** $\frac{-22}{-11} =$ ☐
- **B.** The answer is undefined.

Show your work below.

38. Simplify.

$4-(-3)^4$

$4-(-3)^4 =$ ☐

Show your work below.

---

39. Simplify.

$|13-43| \div 3$

$|13-43| \div 3 =$ ☐

Show your work below.

---

40. Evaluate the expression for $z = -4$.

$4z^3$

The result is ☐.

Show your work below.

---

41. Solve. Check your solution.

$d - 10 = -7$

The solution is d = [ ].

Show your work below.

42. Solve.

$7x = 14$

The solution is x = [ ].

Show your work below.

43. Solve.

$\frac{n}{9} = -5$

The solution is n = [ ].

Show your work below.

44. Simplify the expression by combining like terms.

$6x - 9x$

$6x - 9x =$ [ ]

Show your work below.

45. Simplify the expression by combining like terms.

$2x + x - 6x$

$2x + x - 6x =$ ☐
(Simplify your answer.)

Show your work below.

---

46. Simplify the expression by combining like terms.

$8q + 6q + 5q - 6$

$8q + 6q + 5q - 6 =$ ☐

Show your work below.

---

47. Simplify the expression.

$7 - x + 3x - 3 - 9x$

$7 - x + 3x - 3 - 9x =$ ☐

Show your work below.

---

48. Multiply.

$3(a-6)$

$3(a-6) =$ ☐ (Simplify your answer.)

Show your work below.

---

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

$4(x+6)-15$

$4(x+6)-15 =$ ☐

Show your work below.

---

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

$-4(5n-6)+4n$

$-4(5n-6)+4n =$ ☐

Show your work below.

---

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

$-(4y-5)+9$

$-(4y-5)+9 =$ ☐

Show your work below.

52. Simplify the expression.

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

$4y-2(y-3)+3 =$ ☐

Show your work below.

53. Solve the equation. First combine any like terms on each side of the equation.

$6x+1-5x=10$

The solution is $x =$ ☐.

Show your work below.

54. Solve. First multiply to remove the parentheses.

$3(2x-2)=7x$

$x =$ ☐

Show your work below.

55. Solve the equation.

$44 = 8t - 19t$

The solution is t = [ ].

Show your work below.

---

56. Solve the following equation.

$9x + 45 = 2x + 3$

The solution is x = [ ].
(Simplify your answer.)

Show your work below.

---

57. Solve the equation.

$4 - y = 20$

y = [ ]

Show your work below.

---

58. Solve the equation.

$2(x-3)-4=0$

$x =$ ☐

Show your work below.

---

59. Solve the equation.

$7(y-2)=4y-29$

$y =$ ☐

Show your work below.

---

60. Write the following sentence as an equation. Use x to represent "a number."

Three times a number yields 15.

The equation is ☐.
(Do not simplify.)

Show your work below.

---

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

$\frac{8}{3}$

The numerator of the fraction $\frac{8}{3}$ is ☐.

The denominator of the fraction $\frac{8}{3}$ is ☐.

Is the fraction $\frac{8}{3}$ proper or improper?

- ○ Improper
- ○ Proper

Show your work below.

62. Write the mixed number as an improper fraction.

$4\frac{1}{2}$

$4\frac{1}{2}$ = ☐

Show your work below.

63. Write the mixed number as an improper fraction.

$14\frac{1}{2}$

$14\frac{1}{2}$ = [ ] (Type an integer or an improper fraction.)

Show your work below.

64. Write the improper fraction as a mixed number.

$\frac{31}{13}$

$\frac{31}{13}$ = [ ] (Type an integer, proper fraction, or mixed number.)

Show your work below.

65. Find the prime factorization of the following number.

88

The prime factorization of 88 is [ ].

Show your work below.

66. Write the fraction in simplest form.

$$\frac{8x}{68}$$

$\frac{8x}{68} =$ ☐

Show your work below.

---

67. Write the fraction in simplest form.

$$\frac{20x^2}{28x}$$

$\frac{20x^2}{28x} =$ ☐

Show your work below.

---

68. Determine whether the pair of fractions is equivalent.

$$\frac{5}{13} \text{ and } \frac{3}{7}$$

Choose the correct answer below.

- **A.** The fractions are not equivalent.
- **B.** The fractions are equivalent.

Show your work below.

---

69. Out of every 388 containers of juice bought in a grocery store, 100 are orange juice. What fraction of juice purchased is orange juice?

☐ of the juice purchased is orange juice. (Type an integer or a simplified fraction.)

Show your work below.

---

70. Multiply. Write the product in simplest form.

$$-\frac{3}{8} \cdot \frac{5}{6}$$

$-\frac{3}{8} \cdot \frac{5}{6} =$ ☐

Show your work below.

---

71. Divide. Write the quotient in simplest form.

$$-\frac{15}{28} \div \frac{60}{7}$$

$-\frac{15}{28} \div \frac{60}{7} =$ ☐

Show your work below.

---

72. Perform the indicated operation.

$$\frac{49x^2}{40y} \div \frac{35x}{16y}$$

$\frac{49x^2}{40y} \div \frac{35x}{16y} =$ ☐

(Simplify your answer. Use integers or fractions for any numbers in the expression.)

Show your work below.

73. Perform the indicated operations.

$$\frac{8}{15} - \frac{16}{15} - \frac{13}{15}$$

$\frac{8}{15} - \frac{16}{15} - \frac{13}{15} =$ ☐ (Type an integer or a simplifed fraction.)

Show your work below.

74. Find the LCD for the following list of fractions.

$$\frac{1}{4}, \frac{1}{6}, \frac{7}{15}$$

The least common denominator is ☐.

Show your work below.

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

$$\frac{5}{6} = \frac{}{36}$$

$$\frac{5}{6} = \frac{\square}{36}$$

Show your work below.

76. Perform the indicated operation.

$$\frac{1}{3} - \frac{1}{7}$$

$\frac{1}{3} - \frac{1}{7} =$ ☐ (Type a whole number or a simplified fraction.)

Show your work below.

77. Add or subtract as indicated.

$$\frac{9}{20} - \frac{9}{10}$$

$\frac{9}{20} - \frac{9}{10} =$ ☐

Show your work below.

78. Add the following fractions.

$$\frac{2a}{15} + \frac{5a}{2}$$

$\frac{2a}{15} + \frac{5a}{2} =$ ☐

(Simplify your answer. Use integers or fractions for any numbers in the expression.)

Show your work below.

79. Subtract and simplify.

$$\frac{7}{10} - \frac{7}{15}$$

$\frac{7}{10} - \frac{7}{15} =$ ☐ (Simplify your answer. Type an integer or fraction.)

Show your work below.

80. Insert < or > to form a true sentence.

$$-\frac{1}{4} \;?\; -\frac{7}{10}$$

$-\frac{1}{4}$ (1) _____ $-\frac{7}{10}$

(1) ○ >
○ <

Show your work below.

81. Simplify the complex fraction.

$$\frac{\frac{5}{7}}{\frac{5}{6}}$$

$\frac{\frac{5}{7}}{\frac{5}{6}} =$ ☐ (Type an integer or a simplified fraction.)

Show your work below.

82. Evaluate the expression if $x = -\frac{1}{4}$, $z = \frac{11}{12}$.

$$\frac{x}{z}$$

$\frac{x}{z} =$ ☐ (Type an integer or a simplified fraction.)

Show your work below.

83. Multiply.

$$3\frac{1}{7} \cdot \frac{1}{5}$$

$3\frac{1}{7} \cdot \frac{1}{5} =$ ☐

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

Show your work below.

84. Add.

$$\begin{array}{r} 16\frac{3}{4} \\ +\ 5\frac{3}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 16\frac{3}{4} \\ +\ 5\frac{3}{8} \\ \hline \square \end{array}$$

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

Show your work below.

---

85. Perform the indicated operation.

$$1\frac{1}{2} \div 3\frac{1}{3}$$

The answer is $\square$.

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

Show your work below.

---

86. Solve the equation. Check your proposed solution.

$$x - \frac{1}{36} = \frac{17}{18}$$

$x =$ $\square$

(Simplify your answer. Type an integer or a simplified fraction.)

Show your work below.

---

87. Solve the equation and check the solution.

$-30 = \frac{5}{11}x$

x = ☐

Show your work below.

---

88. Write the decimal 6.97 in words.

Choose the correct answer below.

- ○ **A.** Six and ninety-seven hundredths
- ○ **B.** Six hundred ninety-seven thousandths
- ○ **C.** Six and ninety-seven tenths
- ○ **D.** Six point ninety-seven

Show your work below.

---

89. Write the decimal number in standard form.

seventy-five ten-thousandths

seventy-five ten-thousandths = ☐

Show your work below.

---

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

8.2

8.2 = ☐

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

Show your work below.

---

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

-0.89 -0.88

-0.89 ☐ -0.88

Show your work below.

---

92. Round -0.263 to the nearest hundredth.

-0.263 rounded to the nearest hundredth is ☐.

Show your work below.

---

93. Round 4.57687433 to the nearest thousandth.

4.57687433 rounded to the nearest thousandth is ☐.

Show your work below.

---

94. Write these numbers from smallest to largest.

0.9, 0.4056, 0.40174, 0.4055

Choose the correct answer below.

- **A.** 0.4055, 0.4056, 0.40174, 0.9
- **B.** 0.9, 0.4056, 0.4055, 0.40174
- **C.** 0.9, 0.4055, 0.4056, 0.40174
- **D.** 0.40174, 0.4055, 0.4056, 0.9

Show your work below.

95. Add the following.

$-4.5 + (-3.92)$

$-4.5 + (-3.92) =$ ☐ (Type an integer or a decimal.)

Show your work below.

96. Subtract and check the following.

$-3.32 - 6.2$

$-3.32 - 6.2 =$ ☐ (Type an integer or a decimal.)

Show your work below.

97. Perform the indicated operation.

0.9 + 6.2

0.9 + 6.2 = ☐ (Type an integer or a decimal.)

Show your work below.

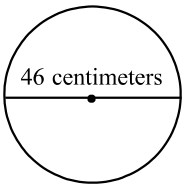
98. Multiply.

(− 5.1)(3.13)

(− 5.1)(3.13) = ☐ (Type an integer or a decimal.)

Show your work below.

99. Find the circumference of the circle given to the right. Then use the approximation 3.14 for π and approximate the circumference.



The exact circumference of the circle is ☐ (1) _____
(Type an exact answer in terms of π.)

The approximate circumference of the circle is ☐ (2) _____
(Simplify your answer. Type an integer or decimal rounded to the nearest hundredth as needed.)

(1) ○ cm. ○ cm^2. ○ cm^3.

(2) ○ cm. ○ cm^2. ○ cm^3.

Show your work below.

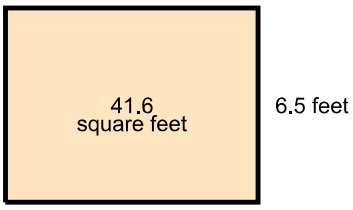
100. Divide.

$-2.856 \div 0.34$

$-2.856 \div 0.34 =$ ☐ (Type an integer or a decimal.)

Show your work below.

101. The area of a rectangle is 41.6 square feet. If its width is 6.5 feet, find its length.



The length of the rectangle is ☐ (1) _____
(Type an integer or a decimal.)

(1)
- ○ feet.
- ○ cubic feet.
- ○ square feet.

Show your work below.

102. Write the number as a decimal.

$\frac{7}{25}$

$\frac{7}{25} =$ ☐

Show your work below.

103. Write the number as a decimal.

$\frac{9}{4}$

$\frac{9}{4} =$ ☐

Show your work below.

104. Find the mean, median, and mode for the set of numbers.

532, 247, 564, 227, 597, 284, 111, 323

The mean is ☐.
(Type an integer or decimal rounded to one decimal place as needed.)

The median is ☐.
(Type an integer or a decimal.)

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

- **A.** The mode is ☐.
  (Type an integer or a decimal. Use a comma to separate answers as needed.)
- **B.** There is no mode.

Show your work below.

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

39 days to 24 days

The ratio of 39 days to 24 days is ☐.
(Type the ratio as a simplified fraction.)

Show your work below.

106. Find the unit price.

$3.23 for 17 bananas

Unit price = $ [ ] per banana

Show your work below.

---

107. Find the unit price and decide which is the better buy. Assume that we are comparing different sizes of the same brand.

Frozen orange juice:
$1.89 for 24 ounces
$0.69 for 9 ounces

The unit price for the 24-ounce package is $ [ ] per ounce.
(Round to three decimal places as needed.)

The unit price for the 9-ounce package is $ [ ] per ounce.
(Round to three decimal places as needed.)

Which package is the better buy?

- ○ 9-ounce package
- ○ 24-ounce package

Show your work below.

---

108. Write the sentence as a proportion.

18 miles is to 1 gallon of gas as 63 miles is to 3.5 gallons of gas.

Choose the correct proportion below.

- **A.** $\frac{18 \text{ miles}}{1 \text{ gallon of gas}} = \frac{63 \text{ miles}}{3.5 \text{ gallons of gas}}$
- **B.** $\frac{3.5 \text{ gallons of gas}}{63 \text{ miles}} = \frac{18 \text{ miles}}{1 \text{ gallon of gas}}$
- **C.** $\frac{18 \text{ miles}}{1 \text{ gallon of gas}} = \frac{3.5 \text{ gallons of gas}}{63 \text{ miles}}$
- **D.** $\frac{18 \text{ miles}}{3.5 \text{ gallons of gas}} = \frac{63 \text{ miles}}{1 \text{ gallon of gas}}$

Show your work below.

109. Determine whether the proportion is true or false.

$\frac{9}{4} = \frac{225}{100}$

Choose the correct answer.

- True
- False

Show your work below.

110. Write the sentence as a proportion. Then determine whether the proportion is a true proportion.

twelve is to three as eight is to four

The proportion is [ ]. (Type an equation. Do not simplify.)

Is the proportion a true proportion?

- Yes
- No

Show your work below.

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

$$\frac{-30}{10} = \frac{15}{n}$$

n = [ ] (Simplify your answer.)

Show your work below.

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

$$\frac{9}{10} = \frac{n}{6}$$

n = [ ] (Type an integer or a decimal.)

Show your work below.

113. Solve the proportion for the given variable.

$$\frac{4.6}{0.7} = \frac{a}{2.7}$$

a = [ ] (Type an integer or a decimal. Round to the nearest tenth as needed.)

Show your work below.

114. Nearly 4 of 5 people choose vanilla as their favorite ice cream flavor. If 120 people attend an ice cream social, how many would you expect to choose vanilla?

[ ] people will choose vanilla ice cream.

Show your work below.

115. Find the square root.

$$\sqrt{\frac{1}{81}}$$

$\sqrt{\frac{1}{81}}$ = [ ] (Type an integer or a simplified fraction.)

Show your work below.

116. Use a table or a calculator to approximate the square root. Round the square root to the nearest thousandth.

$\sqrt{54}$

The answer is ☐.
(Round to the nearest thousandth as needed.)

Show your work below.

---

117. Determine what two whole numbers the square root is between without using a calculator or table. Then use a calculator or table to check.

$\sqrt{58}$

$\sqrt{58}$ is between ☐ and ☐. (Type whole numbers. Use ascending order.)

Show your work below.

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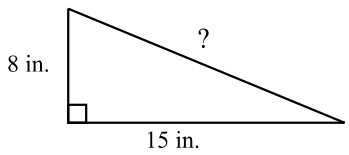
118. Find the unknown length in the right triangle shown to the right.



The unknown length in the given right triangle is ☐ in.
(Type an integer or decimal rounded to the nearest thousandth as needed.)

Show your work below.

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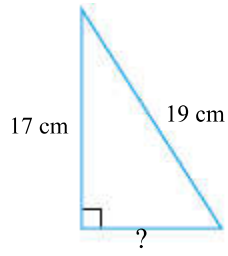
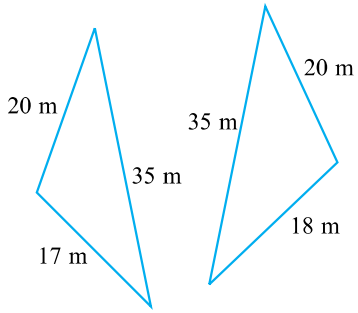
119. Find the unknown length in the right triangle.



The unknown length is approximately ____ centimeters.
(Round to the nearest thousandth as needed.)

Show your work below.

120. Determine whether the pair of triangles is congruent. If congruent, state the reason why, such as SSS, SAS, or ASA.

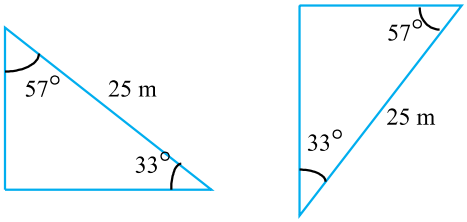


Choose the correct answer below.

- Congruent by SAS
- Congruent by SSS
- Congruent by ASA
- Not congruent

Show your work below.

121. Determine whether the pair of triangles is congruent. If congruent, state the reason why, such as SSS, SAS, or ASA.

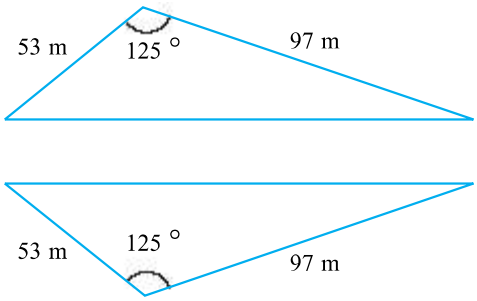


Choose the correct answer below.

- Congruent by ASA
- Congruent by SSS
- Congruent by SAS
- Not congruent

Show your work below.

122. Determine whether the pair of triangles is congruent. If congruent, state the reason why, such as SSS, SAS, or ASA.

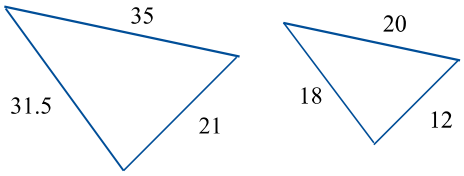


Choose the correct answer below.

- Congruent by ASA
- Congruent by SSS
- Congruent by SAS
- Not congruent

Show your work below.

123. Find the ratio of the corresponding sides of the given similar triangles.

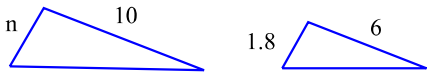


The ratio of the corresponding sides of the first triangle to the second triangle is ☐.
(Type the ratio as a simplified fraction.)

Show your work below.

---

124. Given that the two triangles are similar, find the unknown length of the side labeled with a variable.



The unknown length n is ☐ unit(s). (Simplify your answer.)

Show your work below.

---

125. Write the percent as a decimal.

6%

6% = ☐

Show your work below.

---

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

4%

4% = ☐

Show your work below.

---

127. Write the decimal as a percent.

0.26

0.26 = ☐ % (Simplify your answer. Type an integer or a decimal.)

Show your work below.

---

128. Write the decimal as a percent.

0.019

0.019 = ☐ %

Show your work below.

---

129. Write the percent as a decimal and a fraction.

Approximately 91% of sixth-grade students in a public school recently reported that they use a computer at home.

91% written as a decimal is [ ]. (Simplify your answer.)

91% written as a fraction is [ ]. (Simplify your answer.)

Show your work below.

130.

percent	of	greater	is	base	the number	amount	less

Drag each of the choices given above into the appropriate area below to complete each sentence.

1. The word [ ] translates to " = ".

2. The word [ ] usually translates to "multiplication."

3. In the statement "10% of 90 is 9," the number 9 is called the [ ], 90 is called the [ ], and 10 is called the [ ].

4. 100% of a number = [ ].

5. Any "percent greater than 100%" of "a number" = "a number [ ] than the original number."

6. Any "percent less than 100%" of "a number" = "a number [ ] than the original number."

Show your work below.

---

131. Translate to an equation and solve. Let x be the unknown number.

What number is 26% of 24?

x = ☐ (Type an integer or a decimal.)

Show your work below.

132. Solve.

$87\frac{1}{2}$% of what number is 140?

$87\frac{1}{2}$% of ☐ is 140. (Type an integer or a decimal.)

Show your work below.

133. Solve the following equation.

14 is what percent of 25?

☐% (Type an integer or a decimal.)

Show your work below.

134. A family paid $32,000 as a down payment for a home. If this represents 16% of the price of the home, find the price of the home.

The price of the home is $ [ ].

Show your work below.

---

135. Before taking a typing course, a candidate could type 40 words per minute. By the end of the course, the candidate was able to type 115 words per minute. Find the percent increase.

The percent increase in the speed is [ ] %. (Type an integer or a decimal)

Show your work below.

---

136. The sales tax is $95.50 on a stereo sound system purchase of $1910. Find the sales tax rate.

The sales tax rate is [ ] %.

Show your work below.

---

137. Find the amount of discount and the sale price.

Original Price	Discount Rate	Amount of Discount	Sale Price
$350	55%	?	?

Fill in the table below.

Original Price	Discount Rate	Amount of Discount	Sale Price
$350	55%	$	$

(Simplify your answer. Type an integer or a decimal.)

Show your work below.

138. One very useful application of percent is mentally calculating a tip. Mentally fill in the chart below. To do so, start by rounding the bill amount to the nearest dollar.

Tipping Chart

Bill Amount	10%	15%	20%
$84.33			

Complete the following chart, based on the bill amount rounded to the nearest dollar.

Tipping Chart

Bill Amount	10%	15%	20%
$84.33	$	$	$

(Round to the nearest cent as needed.)

Show your work below.

139. Find the simple interest.

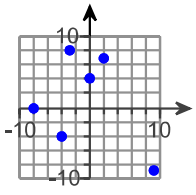
Principal	Rate	Time
$400	16%	21 months

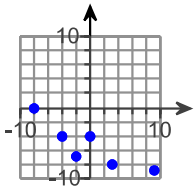
The interest is $ [ ]. (Round to the nearest cent.)

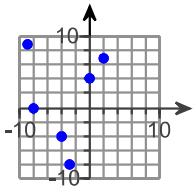
Show your work below.

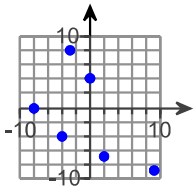
140. Choose the correct graph corresponding to the plot of the following 6 ordered pairs.

(2,7); (−3,8); (0,4); (−8,0); (−4,−4); (9,−9)

A. 

B. 

C. 

D. 

Show your work below.

141. Determine whether the ordered pair is a solution of the given linear equation.

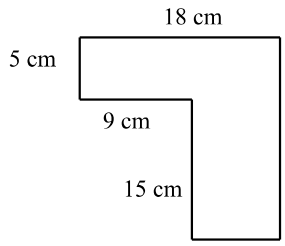
(5,1); $x - 12y = -7$

Choose the correct answer below.

- **A.** The ordered pair is not a solution of the equation because substituting the values of x and y in the equation $x - 12y = -7$ results in a false statement, $-6 = 7$.
- **B.** The ordered pair is a solution of the equation because substituting the values of x and y in the equation $x - 12y = -7$ results in a true statement, $-6 = -6$.
- **C.** The ordered pair is not a solution of the equation because substituting the values of x and y in the equation $x - 12y = -7$ results in a false statement, $-6 = -7$.
- **D.** The ordered pair is a solution of the equation because substituting the values of x and y in the equation $x - 12y = -7$ results in a true statement, $-7 = -7$.

Show your work below.

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

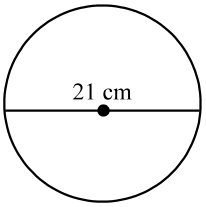


The perimeter of the figure is [ ] (1) _____

(1)
- square centimeters.
- centimeters.

Show your work below.

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



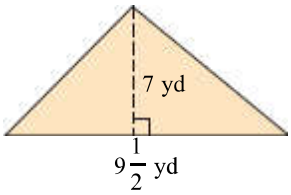
The exact circumference of the circle is ☐ (1) _____
(Simplify your answer. Type an exact answer in terms of π.)

The approximate circumference of the circle is ☐ (2) _____
(Type a whole number or decimal rounded to the nearest hundredth as needed.)

(1) ○ square centimeters. (2) ○ square centimeters.
○ centimeters. ○ centimeters.

Show your work below.

144. Find the area of the geometric figure.

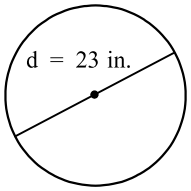


The area is ☐ (1) _____. (Simplify your answer.)

(1) ○ yards
○ square yards
○ cubic yards

Show your work below.

145. Find the area of the given geometric figure. If the figure is a circle, give an exact area and then use 3.14 as an approximation for π to approximate the area.



The exact area of the circle is ☐ (1) _____
(Simplify your answer. Type an exact answer in terms of π.)

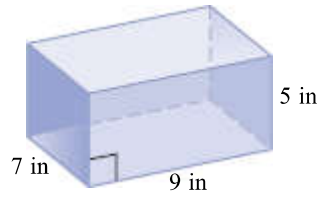
The approximate area of the circle is ☐ (2) _____
(Simplify your answer. Type an integer or decimal rounded to the nearest thousandth as needed.)

(1) ○ in. ○ cu in. ○ sq in.

(2) ○ cu in. ○ sq in. ○ in.

Show your work below.

146. 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) ○ inches ○ square inches ○ cubic inches

(2) ○ inches ○ square inches ○ cubic inches

Show your work below.

147. Decide whether the perimeter or area would be considered when buying wall paper for a wall.

Choose the correct answer below.

- area
- perimeter

Show your work below.

148. Decide whether the perimeter or area would be considered when ordering ribbon needed for a display board.

Choose the correct answer below.

- area
- perimeter

Show your work below.

149. Subtract the polynomials.

$$\left(6x^2 - 5x + 7\right) - \left(2x^2 - 2x\right)$$

$\left(6x^2 - 5x + 7\right) - \left(2x^2 - 2x\right) =$ ☐

Show your work below.

150. Add the polynomials.

$$\left(-4z^2-4z+4\right)+\left(-4z^2+3z+2\right)$$

$\left(-4z^2-4z+4\right)+\left(-4z^2+3z+2\right)=$ [ ]

Show your work below.

Summer Math Assignment

---------ANSWER KEY FOR REFERENCE---------

1. Hundred-thousands

---

2. 7,000,106

---

3. 46

(1) meters.

---

4. 2440

2400

2000

---

5. 850

(1) square feet.

134

(2) feet.

---

6. A. $0 \div 8 =$ **0** (Simplify your answer.)

---

7. B. The answer is undefined.

---

8. 23

---

9. $7^2 \cdot 9^4$

---

10. 6561

---

11. A. $50 + 9 \cdot 6 =$ **104**

---

12. A. $8 \div 2 \cdot 4 + 5 =$ **21**

---

13. A. $5^2 \cdot (8 - 6) + 3^3 + 3^2 =$ **86**

---

14. 256

(1) square meters.

64

(2) meters.

---

15. 15

---

16. 3

---

17. Yes

---

18. Yes

---

19. $\frac{3}{x}$

---

20. 15x

---

21. − 12,764

---

22. <

---

23. 7

---

24. − 66

---

25. 3

---

26. − 16

---

27. − 44

---

28. − 1

---

29. 2

---

30. -36

31. -14

32. -10

33.

34. -18

35. -4

36. 100

37. A. $\frac{-22}{-11} =$ **2**

38. -77

39. 10

40. -256

41. 3

42. 2

43. -45

44. $-3x$

45. $-3x$

46. $19q-6$

47. $-7x+4$

48. $3a - 18$

49. $4x + 9$

50. $-16n + 24$

51. $-4y + 14$

52. $2y + 9$

53. 9

54. -6

55. -4

56. -6

57. -16

58. 5

59. -5

60. $3x = 15$

61. 8

3

Improper

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

63. $\frac{29}{2}$

64. $2\frac{5}{13}$

65. $2^3 \cdot 11$

66. $\frac{2x}{17}$

67. $\frac{5x}{7}$

68. A. The fractions are not equivalent.

69. $\frac{25}{97}$

70. $-\frac{5}{16}$

71. $-\frac{1}{16}$

72. $\frac{14x}{25}$

73. $-\frac{7}{5}$

74. 60

75. 30

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

77. $-\frac{9}{20}$

78. $\frac{79a}{30}$

79. $\frac{7}{30}$

80. (1) >

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

82. $-\frac{3}{11}$

83. $\frac{22}{35}$

84. $22\frac{1}{8}$

85. $\frac{9}{20}$

86. $\frac{35}{36}$

87. -66

88. A. Six and ninety-seven hundredths

89. 0.0075

90. $8\frac{1}{5}$

91. <

92. -0.26

93. 4.577

---

94. D. 0.40174, 0.4055, 0.4056, 0.9

---

95. -8.42

---

96. -9.52

---

97. 7.1

---

98. -15.963

---

99. 46π

(1) cm.

144.44

(2) cm.

---

100. -8.4

---

101. 6.4

(1) feet.

---

102. 0.28

---

103. 2.25

---

104. 360.6

303.5

B. There is no mode.

---

105. $\frac{13}{8}$

---

106. 0.19

---

107. 0.079

0.077

9-ounce package

---

108. A. $\frac{18 \text{ miles}}{1 \text{ gallon of gas}} = \frac{63 \text{ miles}}{3.5 \text{ gallons of gas}}$

---

109. True

---

110. $\frac{12}{3} = \frac{8}{4}$

No

---

111. -5

---

112. 5.4

---

113. 17.7

---

114. 96

---

115. $\frac{1}{9}$

---

116. 7.348

---

117. 7

8

---

118. 17

---

119. 8.485

---

120. Not congruent

---

121. Congruent by ASA

---

122. Congruent by SAS

123. $\frac{7}{4}$

124. 3

125. 0.06

126. $\frac{1}{25}$

127. 26

128. 1.9

129. 0.91

$\frac{91}{100}$

130.

131. 6.24

132. 160

133. 56

134. 200,000

135. 187.5

136. 5

137. 192.50

157.50

138. 8.40

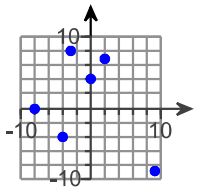
12.60

16.80

---

139. 112.00

---

140. 

A.

---

141. D.

The ordered pair is a solution of the equation because substituting the values of x and y in the equation $x - 12y = -7$ results in a true statement, $-7 = -7$.

---

142. 76

(1) centimeters.

---

143. 21π

(1) centimeters.

65.94

(2) centimeters.

---

144. $33\frac{1}{4}$

(1) square yards

---

145. 132.25π

(1) sq in.

415.265

(2) sq in.

---

146. 315

(1) cubic inches

286

(2) square inches

---

147. area

148. perimeter

149. $4x^2 - 3x + 7$

150. $-8z^2 - z + 6$