

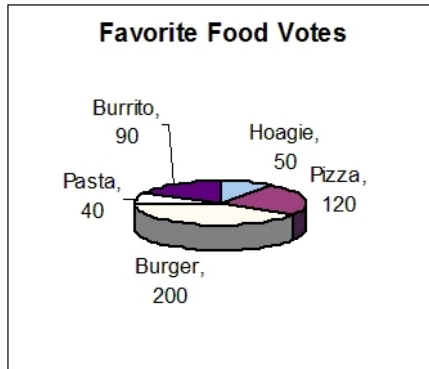
Exam

Name _____

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

- 1) The figure represents the results of a survey on favorite foods.

1) _____



Compare the number of votes for burgers and hoagies.

- A) There were 4 times as many votes for burgers as for hoagies.
- B) There were 4.5 times as many votes for burgers as for hoagies.
- C) There were 3 times as many votes for burgers as for hoagies.
- D) There were 3.5 times as many votes for burgers as for hoagies.

- 2) Identify an appropriate ratio to convert ft to yd by using multiplication.

2) _____

- A) $\frac{3 \text{ ft}}{1 \text{ yd}}$ B) $\frac{3 \text{ yd}}{1 \text{ ft}}$ C) $\frac{1 \text{ ft}}{3 \text{ yd}}$ D) $\frac{1 \text{ yd}}{3 \text{ ft}}$

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

- 3) For the English sentence below, write a mathematical expression and simplify.

3) _____

Divide 9 into 441.

- 4) A sofa has a wholesale price of \$650. A furniture store's markup rate is 40%.

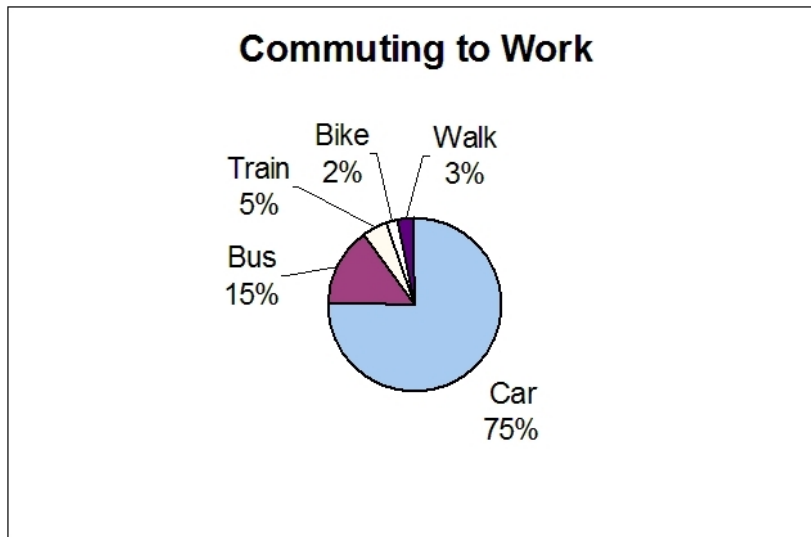
4) _____

- a. What is the markup for this sofa?
- b. What is the retail price?
- c. If the Smiths buy this sofa including a 7% sales tax, how much will they pay?

- 5) A drill with an original price of \$90.00 is on sale for \$70.00. Find the discount and the discount rate. Round the discount rate to the nearest tenth of a percent.

5) _____

- 6) A company did a poll of how their 800 employees commuted to work. The result 6) _____
shown in the graph below.



How many employees commute by bike?

- 7) Find the LCM by dividing by prime numbers.
12 and 18. 7) _____
- 8) Use a protractor to construct an angle of 30° . 8) _____
- 9) How much larger is the Caspian Sea than the Aral Sea? 9) _____

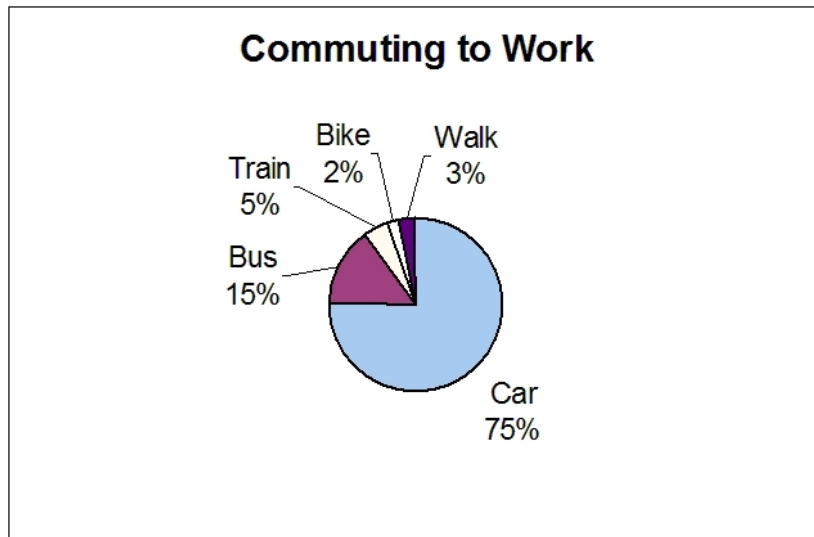
Lake	Locality	Area (sq. mi)
Superior	Canada, U.S.	31,820
Huron	Canada, U.S.	23,010
Caspian Sea	W. Asia	169,000
Aral Sea	Central Asia	26,166
Baikal	S. Siberia	13,200
Michigan	United States	22,400
Victoria	E. Central Africa	26,828

Largest Lakes of the World

- 10) Find two integers whose sum is -15. 10) _____
- 11) Fill in the blank with the correct unit.
1 c = 8 _____ 11) _____

12) The sales tax on a bookcase is \$24.00. If the bookcase cost before tax is \$480, what is the sales tax rate? 12) _____

13) A company did a poll of how their 800 employees commuted to work. The result shown in the graph below. 13) _____



How many employees commute by bus or bike?

14) Determine if the number 1300 is divisible by
a. 2 b. 3 c. 5 d. 10 14) _____

15) Add. Write the answer as a fraction in lowest terms or as an integer.
 $\frac{3}{7} + \frac{5}{7}$ 15) _____

16) Multiply and write the answer as a fraction. $\frac{1}{7} \cdot \frac{3}{8}$ 16) _____

17) Convert the unit of capacity.
3 qt = _____ gal 17) _____

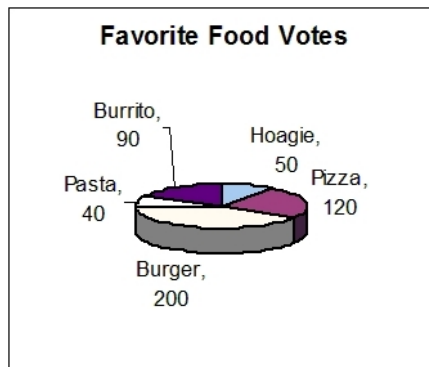
18) Write the percent equation. Then solve for the unknown amount.
What is 81% of 500? 18) _____

19) Complete the table.

Original Price	Discount Rate	Amount of Discount	Sale Price
\$57	20%		
\$600		\$9.50	\$400.00
	50%	\$36.00	\$85.50

19) _____

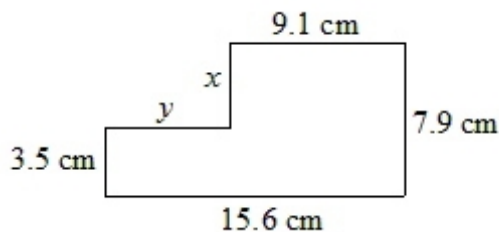
20) The figure represents the results of a survey on favorite foods.



20) _____

How many times more votes were there for pizza as for hoagies?

21) Find the length of the sides labeled x and y . Then find the perimeter.



21) _____

22) Convert the units of length using unit ratios.

$$612 \text{ in.} = \underline{\hspace{2cm}} \text{ yd}$$

22) _____

23) Multiply and simplify to lowest terms. Write the answer as a fraction or an integer.

$$\left(\frac{10}{9}\right)\left(\frac{36}{35}\right)$$

23) _____

24) Evaluate: $\sqrt{0}$

24) _____

25) Expand the exponential expression as a repeated multiplication. Do not simplify.

$$7^8$$

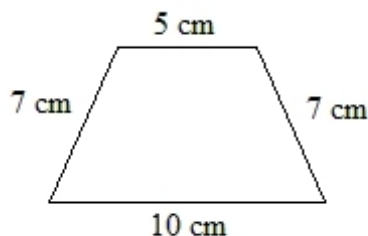
25) _____

26) Divide. Write the quotient in decimal form.

$$5 \overline{)6.2}$$

26) _____

27) Find the perimeter of the trapezoid.



27) _____

28) Add. Write the answer as a fraction simplified to lowest terms.

$$\frac{9}{10} + \frac{2}{7}$$

28) _____

29) Find the LCM of 20 and 30.

29) _____

30) Simplify. $6^2 - 4^2$

30) _____

31) Simplify the expression using the order of operations. Write the answer as a fraction in lowest terms or as an integer.

$$\frac{5}{7} + \frac{9}{7} - \frac{10}{7}$$

31) _____

32) A dog house with an original price of \$55.00 is on sale for \$35.00. Find the discount and the discount rate. Round the discount rate to the nearest tenth of a percent.

32) _____

33) Convert the unit of capacity.

$$12 \text{ pt} = \underline{\hspace{2cm}} \text{ qt}$$

33) _____

34) For the English sentence below, write a mathematical expression and simplify.
Divide 826 by 41.

34) _____

35) A bike that originally cost \$129.99 is on sale for 10% off. Find the discount and the sale price.

35) _____

36) Find two different factorizations of 49.

36) _____

37) Complete the table.

Original Price	Discount Rate	Amount of Discount	Sale Price
\$57	20%		
\$900		\$7.50	\$600.00
	50%	\$38.00	\$67.50

37) _____

38) Use a protractor to construct an angle of 150°.

38) _____

39) Convert the metric unit of length using unit ratios.

39 m = _____ mm

39) _____

40) Subtract. Write the answer as a fraction simplified to lowest terms.

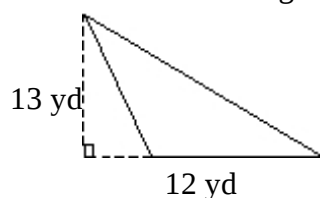
$$\frac{3}{2} - \frac{5}{9}$$

40) _____

41) Find the perimeter of a triangle with sides 1 ft 11 in., 6 ft 3 in., and 8 ft.

41) _____

42) Find the area of the triangle.



42) _____

43) Sidney's chemistry test results are listed.

66%, 69%, 62%, 99%, 72%, 75%

43) _____

a). Find the mean and median. Round to the nearest tenth if necessary.

b). Does the mean or median give a better overall score for Sidney's performance

44) Complete the table.

Original Price	Markup Rate	Amount of Markup	Retail Price
\$99	5%		
\$150		\$105.00	\$162.00
	20%	\$13.00	\$455.00

44) _____

45) Solve the percent problem for the unknown base. 14 is 35% of what number? 45) _____

46) Find the mean. -1, -2, -1, -6, -8, -7, -3 46) _____

47) Determine if the number 75 is divisible by a. 2 b. 3 c. 5 d. 10 47) _____

48) The table provided gives the expenses for one semester at college. 48) _____

	Expenses	Percent	Number of degrees
Tuition	\$12,000		
Books	\$750		
Housing	\$2250		

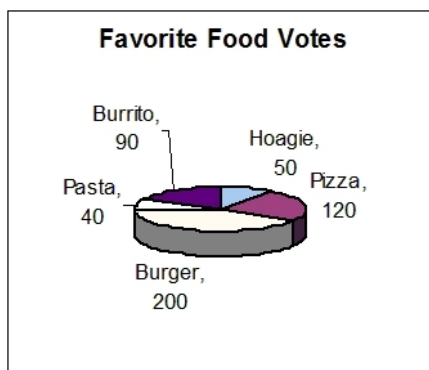
Construct a circle graph to display the college expenses. Label the graph with pe

49) Draw a circle and divide it into sectors of 10%, 25%, and 65% parts of a whole circle. 49) _____

50) Draw a circle and divide it into sectors of 30°, 60°, 90°, and 180°. 50) _____

51) Find the LCM using the prime factorization for each number. 12 and 18. 51) _____

52) The figure represents the results of a survey on favorite foods. 52) _____



What percent of the votes were for burgers?

53) The sales tax on a bookcase is \$14.00. If the bookcase cost before tax is \$280, what is the sales tax rate? 53) _____

54) The measure of an angle is 39.5°. Find the measure of the supplement. 54) _____

55) Convert the units of length using unit ratios.

$$6 \text{ yd} = \underline{\hspace{2cm}} \text{ ft}$$

55)

56) Subtract. Write the answer as a fraction simplified to lowest terms.

$$\frac{1}{100} - \frac{3}{1000}$$

56)

57) Add. Write the answer as a fraction simplified to lowest terms.

$$\frac{5}{9} + \frac{0}{3}$$

57)

58) Simplify. $\frac{102 - 18}{5^2 - 4}$

58)

59) The measure of an angle is 35° . Find the measure of the complement.

59)

60) Find the mean.

$$12, \quad 15, \quad 20, \quad 14, \quad 10$$

60)

61) Write the repeated addition as a multiplication and simplify.

$$4 + 4 + 4 + 4 + 4 + 4$$

61)

62) Simplify. $9 + 2 \cdot 3$

62)

63) Add. Write the answer as a fraction simplified to lowest terms.

$$\frac{1}{7} + \frac{8}{21}$$

63)

64) Multiply the fractions.

$$\frac{22}{3} \times \frac{5}{8}$$

64)

- 65) Water flows into a pool at a constant rate. The water level is recorded at several 1 intervals. 65) _____

Time	Water Level
9:00 A.M.	8.8 in.
10:00 A.M.	10 in.
11:00 A.M.	11.2 in.
12:00 P.M.	12.4 in.

- From the table, how many inches is the water level rising each hour?
- At this rate, what will be the water level at 1:00 PM?
- At this rate, what will be the water level at 3:00 PM?

- 66) Find the simple interest and the total amount including interest. 66) _____

Principal	Annual Interest Rate	Time in Years	Interest	Total Amount
\$3000	4.3%	4		

- 67) Divide. Write the quotient in decimal form. 67) _____
 $-8.1 \div 9$

- 68) Find the mean. 68) _____
 -2, -10, -2, -4, -7, -5, -5

- 69) Find the mean. 69) _____
 12, 15, 20, 14, 10

- 70) Convert the unit of time. 70) _____
 $7200 \text{ sec} = \underline{\hspace{2cm}} \text{ hr}$

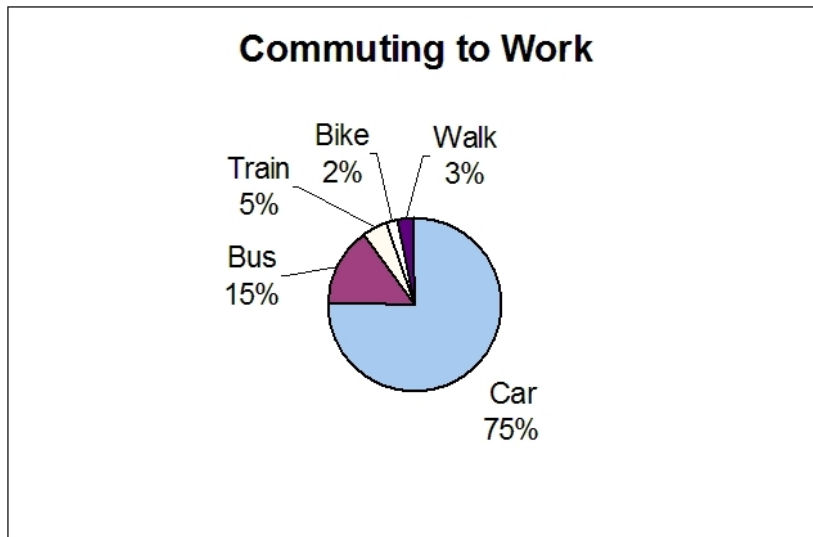
- 71) Find the LCM by listing several multiples of each number. 71) _____
 8 and 12.

- 72) A bike that originally cost \$129.99 is on sale for 10% off. Find the discount and 72) _____
 the sale price.

- 73) Sketch a straight angle. 73) _____

- 74) A sofa has a wholesale price of \$650. A furniture store's markup rate is 40%. 74) _____
 a. What is the markup for this sofa?
 b. What is the retail price?
 c. If the Smiths buy this sofa including a 7% sales tax, how much will they pay?

- 75) A company did a poll of how their 800 employees commuted to work. The result shown in the graph below. 75) _____

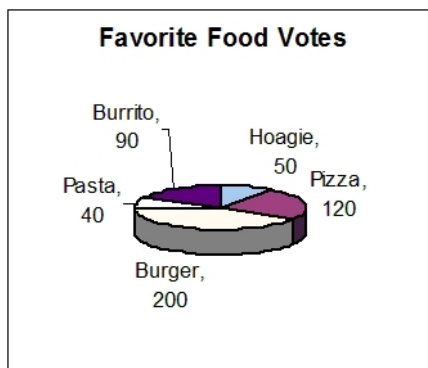


How many employees commute by bus?

- 76) Subtract. Write the answer as a fraction in lowest terms or as an integer. 76) _____

$$\frac{5}{3} - \frac{3}{3}$$

- 77) The figure represents the results of a survey on favorite foods. 77) _____



What percent of the votes were for burritos?

- 78) Multiply. 78) _____

$$\begin{array}{r} 0.9 \\ \times 90 \\ \hline \end{array}$$

- 79) A bike that originally cost \$129.99 is on sale for 10% off. Find the discount and the sale price. 79) _____

80) Fill in the blank with the correct unit. 5280 ft = 1 _____ 80) _____

81) A pair of shoes cost \$65.75. If the sales tax rate is 8%, what is the total bill? 81) _____

82) Complete the table. 82) _____

Cost of Item	Sales Tax Rate	Amount of Tax	Total Cost
\$30	5%		
\$9.50		\$0.19	
	2.5%	\$2.75	
\$65			\$68.90

83) Simplify. $(0.5)^3$ 83) _____

84) Darin plans to build a rectangular patio that is 14 ft by 21.7 ft. What is the total area of the patio? 84) _____

85) Round to the tens place. 373 85) _____

86) Find the mode.
-11 -14 -19 -38 -40 -1 -14 -19 86) _____

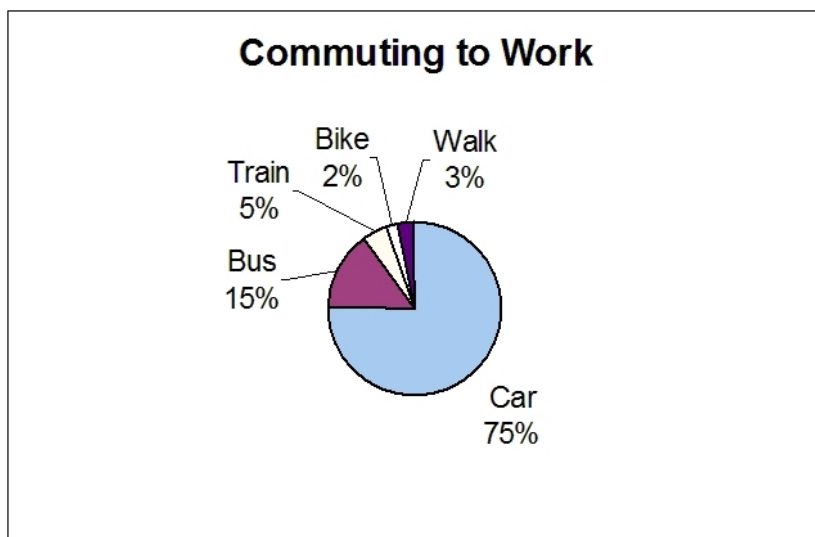
87) Use a protractor to construct an angle of 330° . 87) _____

88) Sketch a right angle. 88) _____

89) Add. Write the answer as a fraction in lowest terms or as an integer.
 $\frac{4}{9} + \frac{3}{9}$ 89) _____

90) Round to the thousands place. 47,316 90) _____

- 91) A company did a poll of how their 800 employees commuted to work. The result shown in the graph below. 91) _____



How many employees do not commute by bus or train?

- 92) A table is purchased from a manufacturer for \$310.00 and is sold retail at \$356.50. Find the markup rate. 92) _____

- 93) A table is purchased from a manufacturer for \$270.00 and is sold retail at \$486.00. Find the markup rate. 93) _____

- 94) Find the mode. 94) _____

33 19 38 12 19 17 13 17

- 95) Multiply and write the answer as a fraction. $8 \cdot \left(\frac{5}{7}\right)$ 95) _____

- 96) A teacher surveyed her class about their pets. The survey denotes the gender of a student and whether the student owned a dog, a cat, or neither. Create a table displaying the data. Be sure to label the rows and columns. 96) _____

boy - dog	girl - cat	boy - dog	boy - dog
boy - dog	boy - dog	girl - dog	boy - dog
girl - cat	girl - neither	boy - cat	
girl - cat	girl - cat	girl - cat	
boy - neither	girl - dog	boy - dog	

97) Which lake listed is the smallest? What is its locality?

97) _____

Lake	Locality	Area (sq. mi)
Superior	Canada, U.S.	31,820
Huron	Canada, U.S.	23,010
Caspian Sea	W. Asia	169,000
Aral Sea	Central Asia	26,166
Baikal	S. Siberia	13,200
Michigan	United States	22,400
Victoria	E. Central Africa	26,828

Largest Lakes of the World

98) What is the difference between the areas of the largest lake in E. Central Africa and the largest lake in Central Asia?

98) _____

Lake	Locality	Area (sq. mi)
Superior	Canada, U.S.	31,820
Huron	Canada, U.S.	23,010
Caspian Sea	W. Asia	169,000
Aral Sea	Central Asia	26,166
Baikal	S. Siberia	13,200
Michigan	United States	22,400
Victoria	E. Central Africa	26,828

Largest Lakes of the World

99) Subtract. Write the answer as a fraction simplified to lowest terms.

99) _____

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

100) The table provided gives the expenses for one semester at college.

100) _____

	Expenses	Percent	Number of degrees
Tuition	\$12,000		
Books	\$750		
Housing	\$2250		

Complete the table.

101) Complete the table.

101) _____

Original Price	Markup Rate	Amount of Markup	Retail Price
\$99	5%		
\$120			\$127.20
		\$60.00	\$260.00
	20%	\$7.00	

102) Find the simple interest and the total amount including interest.

102) _____

Principal	Annual Interest Rate	Time in Years	Interest	Total Amount
\$3000	2%	2		

103) Ty received the following scores for his first 4 tests: 89%, 91%, 78%, 84%
Ty got a score of 98% on his fifth test. How did the high score on the fifth test affect the overall mean of the five tests?

103) _____

104) Fifty people participated in a poll to determine their favorite ice cream flavor. Use the data to construct a pie graph.

104) _____

Flavor	Percent of votes
Chocolate	30%
Strawberry	16%
Vanilla	26%
Other	28%

105) Fill in the balance for each line in the checkbook register.

105) _____

Check #	Description	Credit	Debit	Balance
				\$352.84
3407	department store		\$42.98	
3408	groceries		\$59.82	
3409	electric bill		\$43.77	
	payroll	\$1242.60		
3410	rent		\$450.25	
	transfer from savings	\$300		

106) Write the percent equation. Then solve for the unknown amount.
What is 0.34% of 1500?

106) _____

107) Use a protractor to construct an angle of 45°.

107) _____