Sample Final Exam MAT 090-Basic Math

Name_____

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

Write the digit for the given place value in the whole number.

1) 2,875,478 1) _____
hundred thousands
tens

A) hundred thousands 8
tens 5

B) hundred thousands 2
tens 7

C) hundred thousands 7
tens 4

D) hundred thousands 8
tens 7

Add.

2) 2) _____

$$\begin{array}{r} 9500 \\ 751 \\ 68 \\ 7533 \\ +\ 1428 \\ \hline \end{array}$$

A) 18,180 B) 19,280 C) 18,270 D) 19,170

Solve the problem.

3) Sue had $387 in her bank account. She deposited a $938 pay check and a $570 pay check. How much did she deposit and what was her new balance? 3) _____

A) $1508; $1885 B) $1508; $1895 C) $1325; $1895 D) $957; $1795

Subtract.

4) 4) _____

$$\begin{array}{r} 8929 \\ -\ 243 \\ \hline \end{array}$$

A) 8686 B) 8640 C) 8680 D) 686

Multiply.

5) (817)(98) 5) _____

A) 80,166 B) 80,076 C) 80,056 D) 80,066

Solve the problem.

6) Alan averages 25 miles per gallon of gasoline in his car. How far can he travel on 19 gallons of gasoline? 6) _____

A) 479 miles B) 475 miles C) 44 miles D) 48 miles

Divide by using long division.

7) $86\overline{)23{,}561}$ 7) _____

A) 83 B) 273 R61 C) 273 R83 D) 273

Solve the problem by using addition, subtraction, multiplication, or division as needed.

8) A school bookstore ordered 141 copies of an English textbook. If the total cost was $3384, find the cost of each book. 8) _____

A) $3243 B) $24 C) $22 D) $12

Round the number to the nearest ten, nearest hundred, and nearest thousand.

9) 5086 9) _____

A) Ten 5000
Hundred 5100
Thousand 5000

B) Ten 5090
Hundred 5000
Thousand 5000

C) Ten 5090
Hundred 5100
Thousand 5000

D) Ten 5080
Hundred 5000
Thousand 6000

Simplify the expression by using the order of operations.

10) $3 \cdot (8 - 3) + \sqrt{49}$ 10) _____

A) 28 B) 36 C) 22 D) 40

Simplify the expression by using order of operations.

11) $20 \div 4 \cdot 7 \cdot 20 \div (19 - 14)$ 11) _____

A) 35 B) 28 C) 140 D) 700

Write the mixed number as an improper fraction. Reduce answer to lowest terms when necessary.

12) $15\frac{5}{6}$ 12) _____

A) $\frac{95}{6}$ B) $\frac{25}{2}$ C) 225 D) 30

Write the improper fraction as a whole or mixed number.

13) $\frac{47}{8}$ 13) _____

A) $5\frac{7}{8}$ B) $4\frac{7}{8}$ C) $5\frac{7}{7}$ D) $6\frac{7}{8}$

Find the prime factorization of the number. Write the answer with exponents when repeated factors appear.

14) 612 14) _____

A) $2^2 \cdot 3^2 \cdot 17$ B) $2^3 \cdot 3^2 \cdot 17$ C) $2^4 \cdot 17$ D) $3^4 \cdot 17$

Write the fraction in lowest terms.

15) $\frac{70}{90}$ 15) _____

A) $\frac{70}{90}$ B) $\frac{7}{9}$ C) $\frac{7}{10}$ D) $\frac{10}{9}$

Multiply. Write the answer in lowest terms and as a whole or mixed number where possible.

16) $20 \cdot \frac{3}{10} \cdot \frac{8}{21}$ 16) _____

A) 48 B) $2\frac{2}{7}$ C) $\frac{7}{16}$ D) $\frac{8}{35}$

Solve the problem.

17) Mr. and Mrs. Williams have a home equity loan of $35,700. They have paid off $\frac{4}{21}$ of the loan. 17) _____

How much of the loan have they paid off?

A) $6800 B) $6400 C) $1700 D) $7200

Divide. Write the answer in lowest terms and as a whole or mixed number where possible.

18) $\frac{5}{11} \div \frac{10}{33}$ 18) _____

A) $7\frac{1}{2}$ B) $1\frac{1}{2}$ C) $\frac{2}{3}$ D) $\frac{50}{363}$

Solve the problem.

19) A bag of chips is 24 ounces. A serving size is $\frac{3}{4}$ ounce. How many servings are in the bag of chips? 19) _____

A) 18 servings B) $6\frac{3}{4}$ servings C) $9\frac{1}{3}$ servings D) 32 servings

Multiply. Write the answer in lowest terms and as a whole or mixed number where possible.

20) $7\frac{7}{8} \cdot 10\frac{2}{7}$ 20) _____

A) 81 B) 82 C) 79 D) $70\frac{14}{56}$

Divide. Write the answer in lowest terms and as a whole or mixed number where possible.

21) $5\frac{7}{9} \div 5\frac{1}{3}$ 21) _____

A) $1\frac{1}{12}$ B) $1\frac{2}{12}$ C) $2\frac{1}{12}$ D) $1\frac{1}{11}$

Find the least common multiple for the set of numbers.

22) 30, 40, 50 22) _____

A) 600 B) 300 C) 120 D) 3

Add. Write your answer in lowest terms.

23) $\frac{2}{9} + \frac{1}{3} + \frac{4}{15}$ 23) _____

A) $\frac{7}{27}$ B) $\frac{29}{45}$ C) $\frac{37}{45}$ D) $\frac{83}{135}$

Subtract the fractions. Write the answer in lowest terms.

24) $\frac{7}{9} - \frac{1}{12}$ 24) _____

A) $\frac{2}{3}$ B) $\frac{25}{36}$ C) $\frac{13}{18}$ D) $\frac{1}{2}$

Add. Write the answer in lowest terms as a mixed number.

25) $15\frac{1}{2} + 14\frac{2}{9}$ 25) _____

A) $30\frac{13}{18}$ B) $15\frac{13}{18}$ C) $29\frac{13}{18}$ D) $28\frac{13}{18}$

Subtract. Write the answer in lowest terms as a mixed number.

26) $15\frac{5}{7} - \frac{17}{21}$ 26) _____

A) $15\frac{19}{21}$ B) $13\frac{19}{21}$ C) $14\frac{19}{21}$ D) 14

Use the order of operations to simplify the expression.

27) $2 + \left(\frac{1}{3}\right)^2 - \frac{4}{9}$ 27) _____

A) $\frac{35}{9}$ B) $-1\frac{4}{9}$ C) $\frac{17}{9}$ D) $1\frac{2}{3}$

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

28) 29.04 28) _____

A) $290\frac{2}{5}$ B) $29\frac{1}{25}$ C) $2\frac{113}{125}$ D) 2904

Write the decimal in numbers.

29) Fourteen and seven hundred forty seven thousandths 29) _____

A) 0.14747 B) 14,747 C) 14.747 D) 14.0747

Round the number to the place indicated.

30) Round to the nearest thousandth: 1.5281 30) _____

A) 1.53 B) 1.529 C) 1.52 D) 1.528

Find the sum.

31) 18.19 + 1 + 98.4 + 10.076 31) _____

A) 128.666 B) 127.676 C) 127.666 D) 127.766

Find the difference.

32) 23 - 0.0864 32) _____

A) 22.4136 B) 22.9136 C) 23.0864 D) 23.0136

Multiply.

33) 0.009 × 0.5 33) _____

A) 0.045 B) 0.000045 C) 0.00045 D) 0.0045

Divide.

34) 0.75 ÷ 0.05 34) _____

A) 16 B) 4 C) 15 D) 1.5

Write the fraction or mixed number as a decimal. Round to the nearest thousandth if necessary.

35) $\frac{64}{73}$ 35) _____

A) 1.141 B) 0.877 C) 8.767 D) 0.088

Write the ratio as a fraction in lowest terms.

36) 8 to 18 36) _____

A) $\frac{4}{18}$ B) $\frac{8}{18}$ C) $\frac{8}{9}$ D) $\frac{4}{9}$

Find the unknown number in the proportion. Round answer to the nearest hundredth when necessary.

37) $\frac{x}{39} = \frac{2}{13}$ 37) _____

A) 8 B) 0.7 C) 253.5 D) 6

Use a proportion to solve the problem.

38) If a computer prints 225 lines in 3 seconds, how many lines can it print per minute? 38) _____

A) 4500 lines B) 4510 lines C) 2250 lines D) 4505 lines

39) A label printer prints 4 pages of labels in 1.9 seconds. How long will it take to print 32 pages of labels? 39) _____

A) 19.20 seconds B) 17.20 seconds C) 15.20 seconds D) 18.20 seconds

Write as a decimal.

40) 63.4% 40) _____

A) 0.0634 B) 0.634 C) 0.524 D) 6.34

Write as a percent. Round the percent to the nearest tenth if necessary.

41) 0.43 41) _____

A) 4.3% B) 43% C) 0.043% D) 430%

Write the percent as a fraction or mixed number in lowest terms.

42) 0.3% 42) _____

A) $\frac{3}{1000}$ B) $\frac{3}{2000}$ C) $\frac{3}{100}$ D) $\frac{3}{500}$

Write as a percent. Round the percent to the nearest tenth if necessary.

43) $\frac{7}{25}$ 43) _____

A) 2.8% B) 11.2% C) 250% D) 28%

Supply the missing numbers. Round any decimal to the nearest thousandth and percent to the nearest tenth of a percent if necessary.

44) fraction decimal percent 44) _____

$\frac{5}{8}$

A) 0.745; 74.5% B) 0.745; 745% C) 0.625; 6.25% D) 0.625; 62.5%

Find the part.

45) 32% of 1900 exercise programs 45) _____

A) 608 exercise programs B) 60,800 exercise programs

C) 6080 exercise programs D) 60.8 exercise programs

Find the whole.

46) 68 cats is 20% of what number of cats? 46) _____

A) 3400 B) 340 C) 13.6 D) 34

Solve the problem.

47) The parking lot at a medical center has 75 cars in it. 92% of the cars are four-door. How many cars are four-door? 47) _____

A) 82 cars B) 8 cars C) 69 cars D) 690 cars

Follow the order of operations to work the problem.

48) $14 - (-6) + (-15)$ 48) _____

A) 23 B) -7 C) 5 D) -23

Multiply.

49) $19 \cdot (-6)$ 49) _____

A) -108 B) -133 C) 108 D) -114

Divide.

50) $\frac{234}{-13}$ 50) _____

A) -18 B) $-\frac{1}{18}$ C) -28 D) 18

Simplify.

51) $10 + (-2) + 4(-4)$ 51) _____

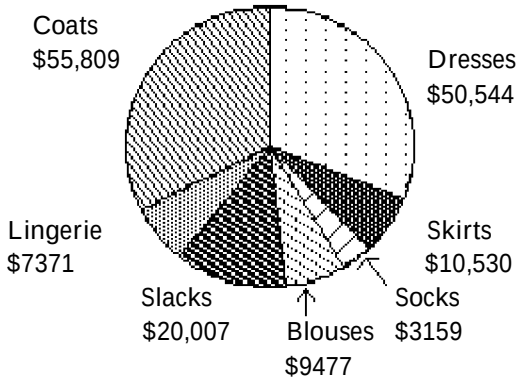
A) -8 B) 28 C) -4 D) 24

52) $\frac{6(2 + 7) + 6(3)}{6(4 - 1)}$ 52) _____

A) 4 B) $\frac{25}{6}$ C) $\frac{75}{23}$ D) $\frac{72}{23}$

Use the circle graph to solve the problem.

53) The circle graph below gives the inventory of the women's department of a store. 53) _____

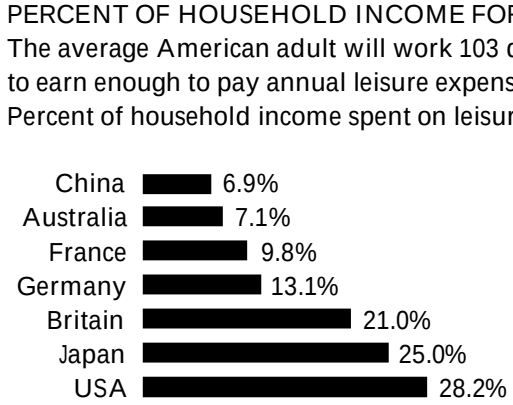


What is the total inventory?

A) $156,897 B) $160,056 C) $106,353 D) $153,738

Suppose that the average adult in the United States will work x number of days (rounded to the nearest day) to earn enough to pay for all of the household's leisure activities in that year. This number can be calculated by multiplying the average percent of household income spent on leisure activities by 365 (the number of days in a year). The bar graph shows the percent of income spent in various countries of the world. Use the graph to answer the question.

54) _____ 54) _____



In which country is the lowest percent of income spent on leisure activities? What percent is this?

A) USA; 71.8% B) China; 6.9% C) China; 93.1% D) Australia; 7.1%

Find the mean for the list of numbers.

55) Cans of soup used by a family in a month: 4, 4, 9, 5, 12, 8 55) _____

Round answer to the nearest whole number if necessary.

A) 5 cans B) 6 cans C) 7 cans D) 9 cans

Answer Key
Testname: MAT 090 SAMPLE FINAL EXAM

1) D
Objective: (1.1) Write Digit for Given Place Value
2) B
Objective: (1.2) Add with Possible Carrying
3) B
Objective: (1.2) Solve Apps: Add
4) A
Objective: (1.3) Subtract with Possible Borrowing
5) D
Objective: (1.4) Multiply (Partial Products)
6) B
Objective: (1.4) Solve Apps: Multiply
7) C
Objective: (1.6) Divide Using Long Division
8) B
Objective: (1.6) Solve Apps: Add, Subtract, Multiply, or Divide
9) C
Objective: (1.7) Round to Nearest Ten, Hundred, and Thousand
10) C
Objective: (1.8) Simplify Using Order of Operations I
11) C
Objective: (1.8) Simplify Using Order of Operations II
12) A
Objective: (2.2) Write Mixed Number as Improper Fraction
13) A
Objective: (2.2) Write Improper Fraction Whole/Mixed Number
14) A
Objective: (2.3) Find Prime Factorization of a Number
15) B
Objective: (2.4) Write Fraction in Lowest Terms
16) B
Objective: (2.5) Multiply Fractions and Whole Numbers
17) A
Objective: (2.6) Solve Apps: Miscellaneous
18) B
Objective: (2.7) Divide Two Fractions
19) D
Objective: (2.7) Solve Apps: Divide Fractions
20) A
Objective: (2.8) Multiply Mixed Numbers
21) A
Objective: (2.8) Divide Mixed Numbers
22) A
Objective: (3.2) Find Least Common Multiple
23) C
Objective: (3.3) Add Unlike Fractions

24) B
Objective: (3.3) Subtract Unlike Fractions

25) C
Objective: (3.4) Add Mixed Numbers

26) C
Objective: (3.4) Subtract Mixed Numbers

27) D
Objective: (3.5) Use Order of Operations

28) B
Objective: (4.1) Write Decimal as a Fraction

29) C
Objective: (4.1) Given Words, Write Decimal in Numbers

30) D
Objective: (4.2) Round Decimal to Indicated Place

31) C
Objective: (4.3) Add Decimals

32) B
Objective: (4.3) Subtract Decimals

33) D
Objective: (4.4) Multiply Decimals with Leading Zero

34) C
Objective: (4.5) Divide Decimal or Whole Number by Decimal

35) B
Objective: (4.6) Write Fraction or Mixed Number as Decimal

36) D
Objective: (5.1) Write Ratio as Fraction

37) D
Objective: (5.4) Solve Proportion

38) A
Objective: (5.5) Solve Apps: Proportions I

39) C
Objective: (5.5) Solve Apps: Proportions I

40) B
Objective: (6.1) Write Percent as a Decimal

41) B
Objective: (6.1) Write Decimal as a Percent

42) A
Objective: (6.2) Write Percent as Fraction or Mixed Number

43) D
Objective: (6.2) Write Fraction as a Percent

44) D
Objective: (6.2) Complete Conversion Chart (Fraction/Decimal/Percent)

45) A
Objective: (6.4) Solve Percent Problem for Part

46) B
Objective: (6.4) Solve Percent Problem for Whole

47) C
Objective: (6.4) Solve Apps: Find Part in Percent Problem

48) C
Objective: (9.2) Add or Subtract Three or More Signed Numbers

49) D
Objective: (9.3) Multiply Signed Numbers

50) A
Objective: (9.3) Divide Signed Numbers

51) A
Objective: (9.4) Use Order of Operations (Integers) I

52) A
Objective: (9.4) Use Order of Operations (Grouping with Division)

53) A
Objective: (10.1) Solve Apps: Read Circle Graph (Absolute Amount)

54) B
Objective: (10.2) Solve Apps: Read Bar Graph

55) C
Objective: (10.4) Find Mean for List of Numbers