MATH 090 Final Exam REVIEW
Name_____

The actual Final Exam will consist of 45 multiple choice questions. You will have 2 hours to complete it and a basic 4-function calculator will be allowed. Best of luck!

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

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

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

1) Which candidate spent the least on advertising? 1) _____
A) Tyler Johnson B) Angela Wong C) Sandra Ouye D) Jose Gonzales

2) The table below shows the population of four states in selected years. 2) _____

Population of Four States from 1960 to 2000
Source: US Census Bureau

	1960	1970	1980	1990	2000
Illinois	10,081,158	11,110,285	11,427,409	11,430,602	12,051,683
Michigan	7,823,194	8,881,826	9,262,044	9,295,297	9,679,052
Indiana	4,662,498	5,195,392	5,490,212	5,544,159	6,045,521
Minnesota	3,413,864	3,806,103	4,075,970	4,375,099	4,830,784

How much did the population of Indiana increase from 1990 to 2000?
A) 501,462 B) 555,309 C) 501,362 D) 555,209

Solve.

3) Lauren scored 14 points in her basketball game on Monday, 6 points on Wednesday, 9 points on Friday, and 10 points on Saturday. Find her total points scored for the week. 3) _____
A) 29 points B) 39 points C) 40 points D) 38 points

4) The textbook for a history class costs $39. There are 26 students in the class. Find the total cost of the history books for the class. 4) _____
A) $975 B) $1014 C) $988 D) $65

5) Ms. Losch has a piece of rope 227 feet long that she cuts into pieces for an experiment in her first–grade class. Each piece of rope is to be 8 feet long. How many 8 foot long pieces of rope can she cut from the original piece of rope? 5) _____
A) 31 pieces of rope B) 3 pieces of rope
C) 28 pieces of rope D) 29 pieces of rope

6) A checking account had a beginning balance of $1415. A deposit was made in the amount of $1412. Every month for 16 months $30 was withdrawn. How much money was left in the account at the end of the 16 months? 6) _____

A) $932 B) $2347 C) $2797 D) $480

7) **Use the facts below.** 7) _____

$2 \cdot 3 = 6$ $4 + 17 = 21$ $20 - 9 = 11$ $5\overline{)35}^{\,7}$

The 21 above is called the _____.

A) quotient B) addend C) sum D) product

8) **Use the facts below.** 8) _____

$2 \cdot 3 = 6$ $4 + 17 = 21$ $20 - 9 = 11$ $5\overline{)35}^{\,7}$

The 6 above is called the _____.

A) product B) factor C) sum D) dividend

9) **Use the facts below.** 9) _____

$2 \cdot 3 = 6$ $4 + 17 = 21$ $20 - 9 = 11$ $5\overline{)35}^{\,7}$

The 7 above is called the _____.

A) subtrahend B) divisor C) quotient D) dividend

10) **Find the quotient and remainder:** $9775 \div 42$ 10) _____

A) 235 R 5 B) 232 R 31 C) 232 D) 235 R 34

11) **Find the quotient and remainder:** $1608 \div 12$ 11) _____

A) 134 B) 135 C) 134 R 3 D) 135 R 2

12) A camera that sells regularly for $530 is discounted by $79 in a sale. What is the sale price? 12) _____

A) $79 B) $609 C) $451 D) $461

13) Charles wishes to pay off a car loan of $4680 in 24 months. How large will his monthly payment be? 13) _____

A) $195 B) $190 C) $2340 D) $185

14) **Simplify.:** $(9^2 - 2) \cdot 2$ 14) _____

A) 98 B) 158 C) 126 D) 77

15) **Write the prime factorization:** 828 15) _____

A) $3^4 \cdot 23$ B) $2^2 \cdot 3^2 \cdot 23$ C) $2^3 \cdot 3^2 \cdot 23$ D) $2^4 \cdot 23$

16) **Multiply:** $\frac{8}{10} \cdot \frac{18}{160}$ 16) _____

A) $\frac{9}{100}$ B) $\frac{13}{85}$ C) $\frac{144}{1600}$ D) $\frac{13}{800}$

.

17) **Multiply:** $\frac{6}{7} \cdot \frac{1}{4} \cdot \frac{2}{5}$ 17) _____

A) $\frac{3}{16}$ B) $\frac{3}{35}$ C) $\frac{6}{35}$ D) $\frac{48}{35}$

18) **Multiply.:** $1\frac{3}{8} \cdot \frac{4}{7}$ 18) _____

A) $\frac{9}{14}$ B) $\frac{11}{14}$ C) $1\frac{12}{56}$ D) $3\frac{11}{14}$

19) **Divide:** $5\frac{5}{9} \div 2\frac{2}{5}$ 19) _____

A) $2\frac{17}{54}$ B) $2\frac{17}{53}$ C) $3\frac{17}{54}$ D) $2\frac{18}{54}$

20) A nail $6\frac{1}{3}$ inches long is driven into a board $5\frac{1}{2}$ inches thick. How much of the nail protrudes from the other side of the board? 20) _____

A) $\frac{5}{6}$ in. B) 1 in. C) $1\frac{1}{3}$ in. D) $1\frac{3}{5}$ in.

21) On a recent trip, Asha drove 216 miles on $14\frac{1}{5}$ gallons of gasoline. How many miles per gallon did she average? 21) _____

A) $15\frac{15}{71}$ mpg B) $\frac{71}{1080}$ mpg C) 605 mpg D) $3067\frac{1}{5}$ mpg

22) A recipe for fudge brownies calls for $2\frac{3}{4}$ cups of cocoa per batch. If you are making $2\frac{1}{2}$ batches, how many cups of cocoa are needed? 22) _____

A) $3\frac{3}{4}$ cups B) $2\frac{1}{2}$ cups C) $6\frac{7}{8}$ cups D) $5\frac{1}{4}$ cups

23) **Find the LCD of** $\frac{7}{12}$ and $\frac{3}{27}$. 23) _____

A) 324 B) 108 C) 39 D) 3

Add or subtract as indicated. Write the answer in simplest form.

24) $\frac{7}{12} - \frac{1}{15}$ 24) _____

A) $\frac{2}{5}$ B) $\frac{93}{180}$ C) $\frac{31}{60}$ D) $\frac{1}{10}$

25) $-\frac{1}{4} - \frac{1}{16}$ 25) _____

A) $\frac{21}{64}$ B) $-\frac{5}{16}$ C) $-\frac{1}{8}$ D) $-\frac{1}{10}$

26) **Add:** $\frac{1}{7} + \frac{1}{14} + \frac{g}{28}$ 26) _____

A) $\frac{2+g}{14}$ B) $\frac{3+g}{14}$ C) $\frac{6+g}{28}$ D) $\frac{g}{7}$

27) **Add or subtract as indicated:** $\frac{7}{2} + \frac{4}{5} - \frac{5}{9}$ 27) _____

A) $-\frac{193}{90}$ B) $\frac{293}{90}$ C) $-\frac{293}{90}$ D) $-\frac{437}{90}$

Simplify.

28) $\left(\frac{-11}{4} + \frac{1}{2}\right) \div \frac{4}{13}$ 28) _____

A) $\frac{-9}{13}$ B) $\frac{-16}{117}$ C) $\frac{-13}{12}$ D) $\frac{-117}{16}$

29) $\left(\frac{1}{3} \cdot \frac{1}{5}\right) + \left(\frac{3}{4} \div 3\right)$ 29) _____

A) $\frac{19}{30}$ B) $\frac{19}{60}$ C) $\frac{19}{6}$ D) $\frac{65}{77}$

30) $\frac{8}{5} \div \frac{1}{4} \cdot \frac{1}{3}$ 30) _____

A) $\frac{96}{5}$ B) $\frac{6}{5}$ C) $\frac{32}{15}$ D) $\frac{2}{15}$

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

31) 0.256 31) _____

A) $\frac{1}{256}$ B) $\frac{32}{125}$ C) $\frac{1}{65{,}536}$ D) $\frac{32}{12}$

Write the fraction as a decimal. If necessary, use repeating decimal notation.

32) $\frac{79}{20}$ 32) _____

A) $3.9\overline{5}$ B) 3.95 C) $3.\overline{95}$ D) $3.\overline{955}$

33) $-\frac{12}{25}$ 33) _____

A) −0.48 B) −0.38 C) −0.58 D) −0.68

34) $\frac{46}{125}$ 34) _____

A) 0.358 B) 0.369 C) 0.468 D) 0.368

Solve.

35) A promotional deal for long distance phone service charges a $15 basic fee plus $0.05 per minute for all calls. If Joe's phone bill was $69 under this promotional deal, how many minutes of phone calls did he make? Round to the nearest integer, if necessary. 35) _____

A) 1680 minutes B) 11 minutes C) 1080 minutes D) 3 minutes

Multiply.

36) −37(0)(−9)(7) 36) _____

A) 37 B) 0 C) 1 D) −37

Simplify.

37) $\frac{[40 \div (-8) + 1]}{[1 - (-1)]}$ 37) _____

A) −1 B) 2 C) −2 D) undefined

38) $\frac{3 - (-3)}{5 + 2(6 - 3) - 2^2 - 4}$ 38) _____

A) 2 B) 3 C) 0 D) 6

39) $\frac{[-30 \div (-6) - 1]}{[1 - (-1)]}$ 39) _____

A) 1 B) −2 C) 2 D) undefined

Add or subtract as indicated.

40) 1 + (−5) − (−12) + 14 40) _____

A) −6 B) −2 C) 8 D) 22

41) −17 + 13 − (−20) + 15 41) _____

A) −9 B) 1 C) 31 D) −35

Simplify.

42) $|-8 + 5| \cdot 5^2$ 42) _____

A) 225 B) −75 C) 28 D) 75

43) $\dfrac{5 - (-5)}{65 + 2(10 - 5) - 8^2 - 6}$ 43) _____

A) 10 B) 0 C) 5 D) 2

44) $(-9)^2 + (-7)^2 + 11$ 44) _____

A) 267 B) –141 C) –267 D) 141

Write the ratio in fractional notation in lowest terms.

45) 84 minutes to 15 hours 45) _____

A) $\frac{75}{7}$ B) $\frac{7}{75}$ C) $\frac{5}{28}$ D) $\frac{28}{5}$

Solve the proportion.

46) $\frac{2}{3} = \frac{7}{x}$ 46) _____

A) $\frac{21}{2}$ B) 14 C) $\frac{7}{2}$ D) 21

47) $\frac{4x}{5} = \frac{3}{2}$ 47) _____

A) $\frac{15}{8}$ B) $\frac{5}{6}$ C) $\frac{15}{2}$ D) $\frac{24}{5}$

Solve.

48) There are 1.5 milligrams of iron in a 3.5 ounce serving of pork. How much iron is in 5 ounces of pork? Round the answer to one decimal place. 48) _____

A) 3.1 mg B) 2.1 mg C) 2.6 mg D) 1.1 mg

49) A bag of fertilizer covers 2000 square feet of lawn. Find how many bags of fertilizer should be purchased to cover a rectangular lawn 370 feet by 230 feet. 49) _____

A) 43 bags B) 4255 bags C) 42 bags D) 426 bags

Write the decimal as a percent.

50) 0.2251 50) _____

A) 0.2251% B) 2251% C) 2.251% D) 22.51%

Write the fraction or mixed number as a percent.

51) $\frac{11}{15}$ 51) _____

A) $73\frac{1}{3}\%$ B) $13\frac{7}{11}\%$ C) $1\frac{4}{11}\%$ D) $7\frac{1}{3}\%$

Solve. If necessary, round percents to the nearest tenth, dollar amounts to the nearest cent, and all other numbers to the nearest whole.

52) The Applegate family paid 30% of the purchase price of a $169,000 home as a down payment. Determine the amount of the down payment. 52) _____

A) $5633 B) $507 C) $5070 D) $50,700

Translate to an equation and solve.

53) What number is 22% of 46? 53) _____

A) 1012 B) 1.012 C) 10.12 D) 101.2

Solve. If necessary, round percents to the nearest tenth, dollar amounts to the nearest cent, and all other numbers to the nearest whole.

54) Lee is taking May out to dinner. He has $56.35 to spend. He wants to tip the server 15% of the cost of the meal. How much can he spend on the meal? 54) _____

A) $47.90 B) $37.57 C) $8.45 D) $49.00

55) An inspector found 15 defective switches during an inspection. If this is 0.005% of the total number of switches inspected, how many switches were inspected? 55) _____

A) 300,000 switches B) 30,000 switches

C) 1500 switches D) 3000 switches

Translate to an equation and solve.

56) 50% of what number is 50? 56) _____

A) 100 B) 10 C) 1000 D) 25

57) 13 is what percent of 25? 57) _____

A) 0.52% B) 5.2% C) 52% D) 5200%

Evaluate the expression for x = –2, y = 3, z = –4.

58) $17x - y^2$ 58) _____

A) 28 B) –25 C) –40 D) –43

Simplify the expression.

59) $8x - 4(5 - x) + 35$ 59) _____

A) $12x + 55$ B) $12x + 15$ C) $7x + 15$ D) $4x + 55$

Solve the equation.

60) $-7x - 36 = -3x - 8$ 60) _____

A) 9 B) –9 C) 7 D) –7

61) $x + 15 + 2x = -5 - 2x - 30$ 61) _____

A) 4 B) –4 C) –10 D) 10

Simplify the expression.

62) $(-9.1)^2 + 3.1 - 4.8$ 62) _____

A) 16.5 B) 7.4 C) 54.76 D) 81.11

Solve. If necessary, round answers to the nearest hundredth.

63) The following test scores were recorded for a student: 74, 69, 67, 63, 69, 55, 65. Find the mean, median, and mode. 63) _____

A) mean: 67 median: 63 mode: 69 B) mean: 67 median: 66 mode: 74
C) mean: 66 median: 67 mode: 69 D) mean: 66 median: 63 mode: 74

Solve.

64) Twice the sum of −60 and a number is 18. Find the number. 64) _____

A) −51 B) 69 C) −21 D) 39

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

65) 23.48 65) _____

A) $23\frac{13}{25}$ B) $234\frac{4}{5}$ C) 2348 D) $23\frac{12}{25}$

Solve.

66) Find the discount rate when the original price is $107.00 and the amount of the discount is $32.10. 66) _____

A) 1% B) 70% C) 30% D) 7%

67) A $190.00 dress is on sale for 10% off. Find the discount and the sale price. 67) _____

A) Discount: $1.90; sale price: $1881.00 B) Discount: $1.90; sale price: $171.00
C) Discount: $19.00; sale price: $171.00 D) Discount: $19.00; sale price: $1881.00

Answer Key
Testname: MATH 090 FINAL EXAM REVIEW 2024 (1)

1) B
2) C
3) B
4) B
5) C
6) B
7) C
8) A
9) C
10) B
11) A
12) C
13) A
14) B
15) B
16) A
17) B
18) B
19) A
20) A
21) A
22) C
23) B
24) C
25) B
26) C
27) C
28) D
29) B
30) C
31) B
32) B
33) A
34) D
35) C
36) B
37) C
38) A
39) C
40) D
41) C
42) D
43) D
44) D
45) B
46) A
47) A
48) B
49) A

50) D
51) A
52) D
53) C
54) D
55) A
56) A
57) C
58) D
59) B
60) D
61) C
62) D
63) C
64) B
65) D
66) C
67) C