

Form A

Math 016

Final Examination

DATE_____

Student Name_____

Score_____

All answers must be written on these test pages. Please show your work, including each step of the solving or evaluating process, on all computational problems.

Each problem with work counts 3 points: 1 for the correct answer and 2 for the correct work.

Note: You will not receive full credit if work is not shown, and it must be neat and readable. **Always reduce to lowest terms.**

1. Subtract:
 $17.35 - 14.48$

2. Add:
 $364.08 + 2.467$

3. Multiply:
 $1\frac{1}{4} \times 3\frac{3}{5}$

4. Which of these numbers is a prime number? 107 or 129

5. Find the LCM (least common multiple) of 12, 15 and 16.

6. Divide: Round the answer to the nearest hundredth:
 $\frac{2.46}{0.7}$

7. Subtract: $11 - 7\frac{3}{5}$

8. Multiply: $(0.00632)(100,000)$

9. Round to the nearest thousandth: 43.03351

10. Multiply: $(2.1)(6.02)$

11. How much would it cost to fill a 12-gallon tank of gasoline at \$2.39 per gallon?

12. Write as a fraction and simplify: 28%

13. Add: $\frac{1}{6} + \frac{3}{4}$

14. Solve the proportion: $\frac{9}{22} = \frac{x}{11}$

15. List these fractions from the smallest to the largest: $\frac{2}{3}, \frac{6}{7}, \frac{16}{21}$

16. Out of 20 students, 3 are absent. What percent are absent?

17. Write as an approximate decimal to the nearest hundredth: $\frac{7}{13}$

18. Write as a decimal: $1\frac{1}{8}$

19. In a room, 48% of the people are smokers. If 12 are smokers, how many people are in the room?

20. Write as a percent: 2.34

21. Write as a decimal: $\frac{6}{125}$

22. If you buy an item for \$30.00 and there is an 8% sales tax, what is the total cost of the item?

23. If 12 ounces of Wheat Cereal costs \$2.79, how much would 5 ounces cost?

24. A shirt is on sale, marked down from \$25 to \$22.25. What was the percent of discount?

25. List the first four multiples of 23

26. Is the following proportion true or false? $\frac{4}{1.2} = \frac{13}{3.9}$

27. Write the prime factorization of 84.

28. Simplify: $\frac{36}{96}$

29. Change to a fraction and simplify: 0.088

30. Change to a mixed number: $\frac{43}{5}$

31. Multiply and reduce to lowest terms: $\frac{4}{27} \cdot \frac{45}{16}$

32. In one town 140 people have a rare blood type. If there are 1750 people in a particular town, what percent of the population has a rare blood type?

33. Is 396 a multiple of 9?

34. Subtract: $3\frac{3}{5} - \frac{7}{15}$

35. Change to an improper fraction: $6\frac{3}{4}$

36. List the following decimals from smallest to largest: 3.23, 3.223, 3.399, 3.233
37. Divide: $326.83 \div 10,000$
38. Divide: $3\frac{1}{8} \div 2\frac{3}{16}$
39. If it takes 12 gallons of gasoline to drive 384 miles, what is the gas mileage (miles per gallon)?
40. 20% percent of family's income is spent on food, 8 % on transportation, 35% on housing, 10% on heat and utilities, 7% on insurance, and the rest on miscellaneous expenses. If the family's income is \$2100 per month, how much is spent on miscellaneous expenses?
41. An item is purchased for \$250. The sales tax is \$20. What is the percent of sales tax?
42. If 24 math books weigh 37 pounds, how much do 40 books weigh?
43. Perform the indicated operations: $\frac{4}{5} - \frac{1}{2} \times \frac{5}{6} \div \frac{5}{6}$
44. Subtract: $(-12) - (-30)$
45. Perform the indicated operations: $(-8 - 2)(-4) \div (-8) - (-7)$
46. Perform the indicated operations: $(3 - 17) \div (2 - 4) - 3 \times 2 + (-1)$

47. The formula for converting from Fahrenheit to Celsius is $C = \frac{5}{9}(F - 32)$.

If the temperature is 68 degrees Fahrenheit, what is it in Celsius?

48. If the temperature is 5 degrees Fahrenheit, what is it in Celsius?

49. Find $-\frac{b}{2a}$ for $a = 2, b = 3$

50. Find $-\frac{b}{2a}$ for $a = -2, b = 6$

51. Find $b^2 - 4ac$ for $a = 2, b = -3, c = -4$