Borough of Manhattan Community College
Department of Mathematics
MAT 008 Final Examination Practice
Form F17

There are 50 questions on this review sheet. The actual final exam will have 24 questions. 20 of them will be multiple choice (4 points apiece), and 4 of them will be open-ended (5 points apiece). Please do not assume that the content and difficulty of these practice questions will be exactly the same as the final examination.

Name: _____

WHOLE NUMBERS:

1. Find the product of three hundred forty-eight and two hundred seventy-seven. Round your answer to the nearest thousands.

a. 90,000   b. 100,000   c. 80,000   d. 96,000   e. 97,000

2. Find the difference of 31,465 and 19,628.

a. 11,837   b. 22,847   c. 12,847   d. 12,243   e. 13,737

3. If Ben can buy 84 boxes of candy for $588, how much does each box of candy cost?

a. $504.00   b. $7.00   c. $49,492.00 d. $17.00   e. $4.35

4. Mo decides to throw a party for his class. He buys 3 pizzas at $12.00 a pie, and three 2-liter bottles of soda for $5.00 a piece. Assuming tax is included in the cost of the pizza and soda, if he pays with three $20.00 bills, what is his change?

a. $17.00   b. $16.00   c. $9.00   d. $6.00   e. $3.00

5. Juanita can choose between a sales job paying a fixed salary of $2000 per week or a sales job in which she gets paid a $62 commission on each sale. If she expects to sell 30 units per week, how much more will she make if she chooses the job paying according to a fixed salary?

a. $1,860   b. $140   c. $12,400   d. $2,092   e. $60,062

6. You buy a car for $39,000. You make a down payment of $3,000 and you have to pay the rest in monthly installments over two years. How much will the monthly payments be?

a. $1,500   b. $3,000   c. $36,000   d. $1,625   e. $3,500

FRACTIONS:

7. Perform the indicated operation: $2\frac{1}{3} + \frac{3}{4} + 1\frac{1}{2}$

a. $3\frac{5}{9}$ b. $3\frac{5}{12}$ c. $4\frac{7}{12}$ d. $3\frac{7}{12}$ e. $4\frac{11}{12}$

8. Find the difference: $5 - 2\frac{3}{5}$

a. $3\frac{3}{5}$ b. $2\frac{2}{5}$ c. $3\frac{1}{5}$ d. $2\frac{1}{5}$ e. $3\frac{2}{5}$

9. $4\frac{1}{2} \times \frac{2}{9}$

a. 1   b. $4\frac{1}{9}$ c. $4\frac{1}{6}$ d. 18   e. $\frac{1}{18}$

10. $3\frac{1}{2} \div 2\frac{1}{3}$

a. $1\frac{1}{3}$ b. $8\frac{1}{6}$ c. $1\frac{1}{2}$ d. $2\frac{2}{3}$ e. 12

11. You have a piece of rope that is $10\frac{1}{4}$ meters long. You then cut a piece of rope off it that is $4\frac{7}{8}$ meters long. How long is the remaining piece of rope?

a. $5\frac{3}{8}$ meters   b. $6\frac{3}{8}$ meters   c. $5\frac{5}{8}$ meters   d. $7\frac{3}{4}$ meters   e. $5\frac{1}{4}$ meters

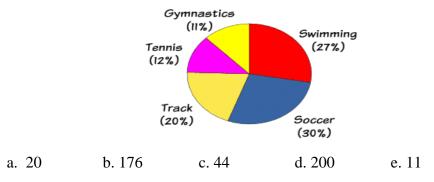12. Use order of operation to perform the indicated operations: $4 \div \left(\frac{1}{2} + \frac{2}{5}\right)$

a. $8\frac{2}{5}$ b. $3\frac{3}{5}$ c. $4\frac{4}{9}$ d. $\frac{9}{40}$ e. $13\frac{1}{3}$

13. Express the following as a fraction simplified completely: 5.08

a. $5\frac{1}{8}$ b. $5\frac{1}{80}$ c. $5\frac{2}{25}$ d. $\frac{4}{5}$ e. 58

14. Express the following as a fraction simplify completely: 35%

a. $\frac{3}{5}$ b. $\frac{7}{20}$ c. $\frac{5}{3}$ d. $3\frac{1}{2}$ e. $\frac{5}{7}$

DECIMALS:

15. The proper numerical value for thirteen thousandths is:

a. 13,000   b. 0.13   c. 130.13   d. 0.013   e. 0.0013

16. Tali decides to make a large batch of chocolate-nut cookies for a party. If Tali puts 3.25 pounds of peanuts, 1.007 pounds of almonds, and 0.3 pounds of chestnuts in her cookies, what is the total amount of pounds of nuts in her cookies?

a. 4.557   b. 1.335   c. 13.35   d. 4.537   e. 3.6507

17. Isaiah has three twenty dollar bills. He buys dinner for himself and some friends which totals to $50.63. How much change should he receive after paying for the dinner?

a. $10.63   b. $9.37   c. $10.37   d. $10.27   e. $110.63

18. Find the quotient: 2.709 ÷ 0.09

a. 301   b. 30.1   c. 3.01   d. 0.301   e. 0.0301

19. Maria bought 6 pairs of socks, which were $3.75 per pair. How much did she pay for the socks?

a. $ .625   b. $45.00   c. $22.35   d. $9.75   e. $22.50

20. Find the product: 0.38× 0.07

a. 266   b. 2.66   c. 0.259   d. 0.266   e. 0.0266

21. Express the following as a decimal. Round your answer to the nearest hundredths: $\frac{7}{15}$

a. 0.715   b. 7.15   c. 0.467   d. 0.47   e. 0.477
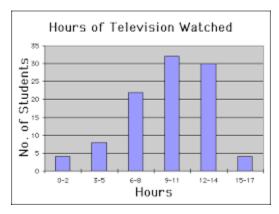
22. Express the following as a decimal: 42.5%

a. 425   b. 42.5   c. 4.25   d. 0.425   e. 0.0425

PERCENTS:

23. Express as a percent: 0.015

a. 150 %   b. 15 %   c. 1.5%   d. 0.15%   e. 0.015%

24. Express as a percent: $\frac{6}{15}$

a. 2.5%   b. 6.15%   c. 25%   d. 15.6%   e. 40%

25. What is 2.5 % of 450?

a. 11.25   b. 180   c. 18   d. 18,000   e. 1.125

26. On a final exam, there were 40 questions. You answered 30 of them correctly. What percent did you answer *incorrectly*?

a. 20%   b. 25%   c. 75%   d. 80%   e. 65%

27. 25 is 80% of what number?

a. 20   b. 31   c. 2,000   d. 31.25   e. 3.2

28. Find 20% of 60% of 10,000.

a. 6000   b. 2000   c. 2600   d. 1200   e. 1000

29. Which represents the largest value?

a. 22%   b. $\frac{4}{9}$ c. 0.53   d. $\frac{1}{4}$ e. 55%

INTEGERS:

30. Use order of operation to simplify completely: $(-3)^2 + 8 \times 2^2$

a. -4   b. -23   c. 41   d. 23   e. -41

31. Use order of operation to simplify completely: $6 + 3(5 - 7)$

a. -18   b. 12   c. 10   d. 18   e. 0

32. Find the quotient: $-270 \div 15$

a. -18   b. 18   c. -0.05   d. -17   e. 17

33. Use order of operation to simplify completely: $-26 + 15 - (-2)$

a. -13   b. -9   c. -11   d. -39   e. 9

34. Mount McKinley in Alaska measures 20,237 feet in elevation. Badwater basin in Death Valley California measures -279 feet in elevation. What is their difference in elevation?

a. -20,516 feet b. 19,958 feet c. 20,516 feet d. -19,958 feet e. 19,516 feet

RATIOS AND RATES:

35. There were 16 men at the party and 20 women. What fraction of the people at the party were women?

a. $\frac{16}{20}$ b. $\frac{4}{5}$ c. $\frac{4}{9}$ d. $\frac{5}{9}$ e. $\frac{5}{4}$

36. If a recipe that serves 4 people calls for 2.5 cups of flour, how many cups of flour should be used if 10 people need to be served?

a. 6.25 cups   b. 16 cups   c. 1 cup   d. 1.6 cups   e. 10 cups

37. If 24 roses cost $18.00, how much does a single rose cost?

a. $12.00   b. $4.32   c. $1.33   d. $ .75   e. $ .45

SCIENTIFIC NOTATION, AVERAGES, GRAPHS:

38. Find the average (mean) of the following numbers: 20, 44, 61, 45

a. 44   b. 42.5   c. 41   d. 45   e. 20

39. Jenny surveyed her neighborhood to find the average (mean) cost of a slice of pizza. She went to six pizzeria's and recorded the price of a single cheese slice: $1.35, $2.20, $1.09, $ .65, $2.05, $1.06

What is the mean price of a single slice of pizza from those pizzerias?

a. $1.40   b. $1.25   c. $ 1.55   d. $ .75   e. $1.39

40. Express the following number in scientific notation: 0.00735

a. 7.35×10^3 b. 73.5×10^2 c. 7.35×10^{-4} d. 7.35×10^{-3} e. 735×10^{-5}

41. Express the following number in scientific notation: 1,405,000

a. 1.45×10^6 b. 1.405×10^6 c. 14.05×10^5 d. 1.405×10^{-6} e. 1.45×10^3

42. Express in scientific notation: five billion, seven hundred fifty four million:

a. 5.000754×10^8 b. 5.754×10^9 c. 5.754×10^{-8} d. 57.5×10 e. 5.754×10^8

43. The following pie chart below represents the after school sports that a group of fourth graders were enrolled in, at PS 166. If there are 220 students in fourth grade at PS 166, how many of them are enrolled in track?

a. 20   b. 176   c. 44   d. 200   e. 11

44. Which one of the following statements about the bar graph below is NOT true?

a. More students watched between 9 and 11 hours of television than 12 and 14 hours.

b. About the same amount of students watched between 15 and 17 hours of television, as those who watched between 0 and 2 hours.

c. About 4 times as many students watched between 6 to 8 hours, as those who watched between 0 and 2 hours.

d. About two times as many students watched between 12 to 14 hours, as those who watched between 3 to 5 hours.

e. About 30 students watched between 3 to 8 hours of television each night.

OPEN ENDED QUESTIONS:

45. The ratio of sushi eaters to pizza eaters on West 89th street is 3 to 8. If there are 256 pizza eaters, how many sushi eaters are there?

46. There are 84 students in a large Calculus lecture at SUNY- Binghamton. $\frac{3}{4}$ of the students passed their final Calculus exam. How many of the students passed their final Calculus exam? How many of the students did NOT pass their final Calculus exam?

47. A pair of high-end shoes at $400 was marked down 10%. The following week, it was then marked down another 20% from the previous sale price. What is the current price of the shoes?

48. You need to cut 4 pieces of ribbon that are $3\frac{1}{4}$ inches each, and 5 pieces of ribbon that are $2\frac{1}{3}$ inches each. If these are cut from a 30 inch piece of ribbon, how much ribbon will be left?

49. You bought five sandwiches, each of which are $12.00, not including 6% tax. After adding tax, how much change would you get from a hundred dollar bill?

50. $\frac{5}{12}$ of the students in Mrs. Janna's class prefer cats to any other animal. 45% of the students in Mrs. Janna's class prefer dogs to any other animal. If there are 60 students in Mrs. Janna's class, how many more students prefer dogs to cats?

ANSWER KEY:

1. d	26. b
2. a	27. d
3. b	28. d
4. c	29. e
5. b	30. c
6. a	31. e
7. c	32. a
8. b	33. b
9. a	34. c
10. c	35. d
11. a	36. a
12. c	37. d
13. c	38. b
14. b	39. a
15. d	40. d
16. a	41. b
17. b	42. b
18. b	43. c
19. e	44. d
20. e	45. 96 sushi eaters
21. d	46. 63 passed, 21 did NOT pass
22. d	47. $288
23. c	48. $5\frac{1}{3}$ inches
24. e	49. $36.40
25. a	50. 2 more prefer dogs to cats