Borough of Manhattan Community College
Department of Mathematics
MAT 012 Pre-Algebra Assessment Practice Midterm

The actual exam will have 24 questions: 20 multiple choices (4 points each) and 4 short answers (5 points each). Please do not assume that the content or difficulty level of these practice questions are exactly the same as the actual examination.

1. You buy two PCs at $570 each. You have to make a $96 down payment, and for the next year, you agree to pay the remainder in equal installments. How much will the monthly payments be?

   a. $39.50 b. $55.50 c. $ 87.00 d. $47.50 e. $95.00

2. Compute: $(-3)^2 + 8 \times 2^2 =$

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

3. Perform the operation: $8\frac{1}{3} - 4\frac{1}{2}$

   a. $4\frac{1}{5}$ b. $4\frac{1}{6}$ c. $\frac{5}{6}$ d. $3\frac{5}{6}$

4. Add: $2\frac{4}{7} + \frac{9}{14}$

   a. $3\frac{1}{2}$ b. $2\frac{14}{17}$ c. $3\frac{3}{14}$ d. $3\frac{17}{14}$

5. $21 \div 1\frac{1}{3} =$

   a . $\frac{2}{9}$ b. $1\frac{3}{7}$ c. $1\frac{7}{3}$ d. $7\frac{1}{3}$ e. $15\frac{3}{4}$

6. Convert $\frac{7}{9}$ to a decimal, rounded to the nearest tenth:

   a. 8.8 b. 0 .88 c. 0.9 d. 0.8 e. 0.0888

7. Candidate A got $\frac{2}{5}$ of the vote. Candidate B got $\frac{1}{4}$ of the vote. If Candidate C got the rest of the votes, what fraction of the votes went to Candidate C?

   a. $\frac{1}{2}$ b. $\frac{3}{20}$ c. $\frac{7}{20}$ d. $\frac{13}{20}$ e. $\frac{1}{3}$

8. $7.2 + 6.9 + 0.077 =$

a. 2.18 b. 21.8 c. 14.177 d. 141.77

9. Calculate: $0.8 \times 0.11 =$

a. 0.88 b. 0.9 c. 0.09 d. 0.088

10. Find the largest number below

a. $\frac{1}{6}$ b. $\frac{4}{7}$ c. $\frac{2}{3}$ d. $\frac{3}{8}$ e. 0.6

11. Solve for x: $\frac{5}{11} = \frac{7}{x}$

a. $\frac{35}{11}$ b. $15\frac{2}{5}$ c. $3\frac{3}{11}$ d. 77

12. 81 is 90% of what number?

a.72.9 b. 729 c. 100 d. 90

13. Convert to a percent: $\frac{6}{15}$

a. 2.5% b. 6% c. 25% d. 33.3% e. 40%

14. If you answer 35 questions and get 14 of them wrong, what percent did you get right?

a. 2.86% b. $77\frac{1}{7}\%$ c. 25% d. 40% e. 60%

15. What is 1.5% of 300?

a. 450 b.200 c.20 d. 2 e. 4.5

16. Find the average (mean) of the following test scores: 75, 80, 83, and 90.

a. 328 b. 82 c. 100 d. 85

17. Compute: $-2 - (-31)$

a. -33 b. 29 c. -29 d. 33

18. Write in scientific notation: five billion, seven hundred fifty four million

a. 5754×10^5 b. 5754×10^6 c. 0.575 d. 5.75×10^{11} e. 5.754×10^9

19. Juanita can choose either 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. $1860 b. $140 c. $12,400 d. $2092 e. $60,062

20. Express $\frac{9}{17}$ as a decimal rounded to the nearest hundredth place value.

a. 0.53 b. 0.54 c. 1.88 d. 1.89

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

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

22. Write as a fraction in simplified form: 0.85

a. $\frac{1}{20}$ b. $\frac{5}{8}$ c . $\frac{85}{100}$ d. $\frac{17}{20}$ e. $\frac{17}{200}$

23. There were 16 men at the block 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. $\frac{5}{4}$

24. A taxi charges $2.50 initially and $1.25 for each mile. How far did the taxi drive if the total cost of the trip was $17.50?

a. 8 miles b. 12 miles c. 7 miles d. 14 miles e. $\frac{1}{2}$ mile

25. Change 2.05 to a mixed number in simplified form.

a. 205 b. $\frac{1}{20}$ c. $2\frac{1}{2}$ d. $2\frac{1}{50}$ e. $2\frac{1}{20}$

26. Which number is not equivalent to others?

a. $\frac{3}{4}$ b. $\frac{75}{100}$ c. $\frac{16}{24}$ d. $\frac{21}{28}$ e. 0.75

Short Answers

27. If a recipe that serves 4 people calls for $2\frac{1}{2}$ cups of flour, how much flour should be used if there are 10 people to be served?

28. If you bought five sandwiches, each of which cost $12.00, not including 8% of tax. After adding the tax, how much change would you get from a hundred dollar bill?

29. A laptop priced at $1200 was marked down 50%. A week later it is marked down another 25% from the previous sale price. What is the current price?

30. If $\frac{3}{4}$ of the students passed, and there were 84 students in the class, how many *did not pass*?

31. You need to cut 5 planks of wood that are $1\frac{1}{4}$ feet long each, and 3 planks of wood that are $2\frac{3}{4}$ each. If these are cut from a 20 ft length of wood, how much wood will be left?

KEY MAT 012 Pre-Algebra Assessment Practice

1. C
2. C
3. D
4. C
5. E
6. D
7. C
8. C
9. D
10. C
11. B
12. D
13. E
14. E
15. E
16. B
17. B
18. E
19. B
20. A
21. D
22. D
23. D
24. B
25. E
26. C
27. $6\frac{1}{4}$ cups
28. $35.20
29. $450
30. 21 students
31. $5\frac{1}{2}$ feet