

MATH 201 Proficiency Examination

Testing Services and Department of Mathematical Sciences

# Eligibility

Persons with an extensive background in mathematics may consider satisfying the Math 201 prerequisite to Math 402 by passing an examination demonstrating proficiency in the content of Math 201. **An application to take the examination must be completed.** The application is available from the office of the Department of Mathematical Sciences, Watson Hall 320. After reviewing your application, you will receive (by mail) a permit to take the exam, or a written notice of the reasons for the rejection of your request to take the exam.

# Registration Procedure

This exam must be scheduled in advance with [Testing Services](https://www.niu.edu/testing/), 815-753-1203, testing@niu.edu.

Prior to scheduling your appointment with us, make sure you have received your permit from the Department of Mathematical Sciences. Make sure you bring your permit and photo ID with you to test.

# Form of the Exam

The exam consists of 50 multiple choice questions. As noted above, computational facility is not sufficient. Sample questions appear on the reverse of this sheet. You will have two hours to complete the exam. The passing score is 70%. The use of a calculator is **not** permitted for this exam.

# Preparation for the Exam

Preparation for the exam should be taken seriously; fewer than one-third of those who have recently tested have passed. To prepare for the exam, you may wish to use the current textbook for Math 201. This textbook may be obtained from the textbook section of the University bookstore.

# Test Results

You will receive written notification of your results within 10 days of the examination. If you pass, you will receive three hours of proficiency credit for Math 201. There is no penalty for failing; however, only one attempt at the examination is allowed.

# Additional Questions?

Contact: Chair, Teacher Education Committee, Department of Mathematical Sciences at (815)753-0566.

**Note:** Students may not earn proficiency credit for a course for which they have received credit; nor may they receive credit for courses which substantially overlap or are prerequisite to any in which they are enrolled or for which they have received credit. Normally, a student may attempt to gain proficiency credit for a particular course only once. (Academic Regulations) Proficiency Examinations, Northern Illinois University Undergraduate Bulletin.

# Topics Included in the Examination

**Note:** Each topic includes theory; computational facility is not sufficient.

Problem-solving heuristics Ratio and Proportions (including Percents)

Set Theory Number systems (including signed numbers)

The whole number system Geometry and Measurement

Number Theory Statistics and Probability

Rational numbers (Fractions and Decimals)

1. For which of the diagrams does $n(A∩ \overline{B}$) = $n\left(A\right)-n\left(B\right)$? [Here $n\left(A\right)=$ number of members of A, $\overline{B}$ = complement of B.]
2. Find $24\_{5} × 32\_{5}$.
3. $768\_{5}$
4. $1323\_{5}$
5. $1423\_{5}$
6. $231\_{5}$
7. Which of the following properties holds for **division of rational numbers**?
	1. Identity
	2. Closure
	3. Commutativity
	4. Associativity
8. Approximate the area of the region below.

 5 units

 30 units

1. 159.8 sq. units
2. 169.6 sq. units
3. 189. 3 sq. units
4. 228.5 sq. units
5. If the ratio of boys to girls in a class is 3:5, and there are 40 students in the class, how many are boys?
6. 15
7. 16
8. 20
9. 24

 Key: 1. (c), 2. (c), 3. (a), 4. (a), 5. (a)