

NHTI Mathematics Placement Test for MATH122C and MATH124C

A placement test is required of all NHTI students enrolling in MATH122C or MATH124C. The purpose of the test is to place you into a math course that matches your current math knowledge. The score you achieve on the test will help determine which of three courses you should enroll in: MATH092C, MATH122C, or MATH124C. Please use only your knowledge for the test, as the use of online resources, calculators (unless included with the question), or the knowledge of others may result in over-placement. This often results in failure of the math course in which you were incorrectly placed.

The test has two parts: Part 1 will assess your readiness for MATH122C, and Part 2 will assess your readiness for MATH124C. Each comprises 20 questions and a time limit of 40 minutes. Any question that requires the use of a calculator will have an online calculator available to you. If your Part 1 score is less than 75%, consider enrolling in MATH092C. If your Part 1 score is 75% or greater, you are eligible to enroll in MATH122C, and you will have access to Part 2, which will check your readiness for MATH124C. As with the first part, you will need to achieve a grade of 75% or greater to enroll in MATH124C. You should expect to spend 1.5 hours on the placement exam if you attempt both parts.

To help prepare for your placement exam, use the following list of topics:

For Part 1, you will be assessed on your ability to:

1. Apply the properties of real numbers to simplify algebraic expressions.
2. Solve algebraic equations in one variable, including formulas and proportions.
3. Solve algebraic inequalities in one variable, including single and compound inequalities, and show solutions in interval notation and on a number line.
4. Graph points and lines on a coordinate plane.
5. Write linear equations from information given about the line.
6. Graph and define functions using function notation.
7. Solve and graph systems of linear equations, including applications of systems.
8. Apply the rules of exponents in simplifying algebraic expressions.
9. Perform operations on polynomials.
10. Demonstrate the techniques of factoring polynomials.
11. Perform operations on rational expressions and express in simplest terms.
12. Perform operations on radical expressions and express in simplest terms.
13. Solve and graph quadratic equations, including applications of quadratic equations.

For Part 2, you will be assessed on your ability to:

1. Solve systems of linear equations and linear inequalities.
2. Factor polynomial expressions and solve polynomial equations by factoring.
3. Perform algebraic operations on rational expressions to include addition, subtraction, multiplication, division, and simplification.
4. Graph linear, piecewise linear, quadratic, exponential, and logarithmic functions.
5. Describe, evaluate, transform, and determine the inverse of functions using function notation.
6. Solve simple, compound, and absolute value inequalities.
7. Perform algebraic operations on radical expressions to include addition, subtraction, multiplication, division, simplification, and rationalization in both radical and rational exponent form.
8. Solve linear, quadratic, rational, radical, exponential, and logarithmic equations.

Khan Academy, <https://www.khanacademy.org/>, is a free online site with tutorial videos and exercise problems to help you review any of the above topics.

If you have any questions, please contact your advisor or the Mathematics Department chair.

Best of luck on your exams!