MA 105 Proficiency Exam

The **MA 105 Proficiency Exam** is offered prior to the beginning of the fall semester for any first-time student enrolled in MA 105. Students are allowed one attempt to complete the exam, and those scoring 80% or above will receive a waiver for the course through verified competency.

It is a 2-hour timed test with approximately 75 multiple-choice questions. Although calculators are not provided, students may use their own **basic 4-function calculator**, which may be purchased at any local dollar store, if they bring it with them to the testing location—**no sharing**. Some examples of calculators that are not permitted would be scientific/ graphing calculators, calculators on phones, watches, or any other electronic device, models that make noise or require electricity, etc. Questions concerning calculator usage should be discussed with the instructor prior to reporting to the test location.

A list of exam topics include:

- Problem-solving Skills: word problems; inductive & deductive reasoning; patterns—arithmetic, geometric & Fibonacci; and logic
- Number Systems & Sets: set notation; one-to-one correspondence; equal vs equivalent sets; Venn diagrams; cardinal number; set intersection & union; set difference; subsets; and Cartesian product
- Whole Numbers: addition; subtraction; multiplication; division; estimation; and whole number algorithms & properties
- Number Theory: divisibility; prime & composite numbers; factors & factorization; greatest common divisor; and least common multiple
- Rational numbers: addition, subtraction, multiplication & division of integers, fractions, decimals, etc.; ratios & proportions; percentages
- Algebra: translate & solve single variable equations; order of operations