

Fundamental Outcomes Mastery/Retention

Fundamental outcomes (ie, skills) of MATH 10150 are listed below. Note that these are NOT the only topics that will be covered in the course but rather the baseline skills that are absolutely essential to have mastered in order to be successful in calculus. There are other techniques, tools, and mathematical “things” you will need for calculus, but if you struggle with these, you will struggle with calculus.

#	Fundamental Outcome
1	Work with functions of various types, including piecewise, and be able to find their domain, writing it in interval notation.
2	Simplify algebraic expressions, including rational expressions and expressions involving exponents (both positive and negative, whole number and rational).
3	Factor polynomials via the GCF and special formulas.
4	Solve both linear and quadratic equations and inequalities via factoring and/or the quadratic formula.
5	Find the average rate of change of a function.
6	Compose and decompose functions.
7	Find equations of lines given various pieces of information.
8	Model with linear functions.
9	Determine limits at infinity (end-behavior) of polynomial and rational functions.
10	Perform algebraic operations on rational functions.
11	Identify vertical asymptotes and holes of rational functions.
12	Identify domain and range of exponential and logarithmic functions.
13	Expand/condense logarithmic expressions and solve exponential/logarithmic equations.
14	Find and simplify the difference quotient for various types of functions.
15	Convert between degrees and radians and identify/describe special angles in both systems.
16	Use the unit circle to find values of all trigonometric functions of special angles.
17	Use right-triangle trigonometry.
18	Solve equations using trigonometric functions.