

Refresh and Supplemental Resources for Calculus I

These resources are designed to be used to help students refresh their prerequisite course knowledge and provide supplementary course resources.

| Calc I Topic | Algebra/Trig Prerequisite Videos | Algebra/Trig Prerequisite Practice Problems |
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| Function Representations | Functions, Absolute value | Functions |
| Catalog of Functions | Exponents , Radicals | Exponential Functions , Logarithm Functions |
| Transformations of Functions | Graphing and common graphs | Common Graphs |
| Calculating Limits | Multiplying polynomials, Rationalizing, Factoring, Domain of rational expressions | |
| Derivatives and Rates of Change | Simplifying rational expressions | Rational Expressions |
| Differentiation formulas | Exponents , Radicals | |
| Derivatives of trigonometric functions | Graphs of trig functions, trig formulas, trig function evaluation | Trig Functions |
| Chain rule | Exponents, Simplifying rational expressions | |
| Implicit differentiation | Solving equations | |
| Related rates | Review front of book chart on geometry formulas | |
| Optimization | Factoring | Factoring in Algebra |

Additional Useful Resources:

- Just Math Tutorials (<http://patrickjmt.com/>) – short videos showing how to solve problems from algebra, trigonometry, calculus, differential equations, linear algebra and probability and statistics
- Khan Academy (<https://www.khanacademy.org/>) – structured online mathematics course materials, including instructional videos and practice problems
- Paul’s Online Notes (<https://tutorial.math.lamar.edu/problems/calci/calci.aspx>) - mathematics practice problems with solutions
- Desmos (<https://www.desmos.com/calculator>) - online graphing calculator
- WolframAlpha (<https://www.wolframalpha.com/>) – multifunctional computational platform that helps solve equations, graph functions, look up formulas, etc.
- Algebra Cheat Sheet (https://tutorial.math.lamar.edu/pdf/Algebra_Cheat_Sheet.pdf), Trigonometry Cheat Sheet (https://tutorial.math.lamar.edu/pdf/Trig_Cheat_Sheet.pdf), and Calculus Cheat Sheet (https://tutorial.math.lamar.edu/pdf/calculus_cheat_sheet_all.pdf)