

Refresh and Supplemental Resources for Calculus II

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

| Calc II Topic | Calc I Prerequisite Videos | Calc I Prerequisite Practice Problems |
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| Area between 2 curves | Basic Integration | Indefinite Integrals |
| Trig Integrals | Derivatives of Trig Functions | Differentiate Trig Functions |
| Volumes | Integrate using U substitution | Substitution Rule |
| Integration by parts | Derivative of logarithms | Derivative of powers and logs |
| Integration by parts | Differentiation rules | Product and Quotient rule, Chain Rule |
| Partial fractions | Factoring Quadratics | Factoring practice problems |
| Differential equations | Implicit differentiation | Implicit differentiation practice |
| Areas and lengths in polar coordinates | Polar Coordinates – The Basics | Polar Coordinates – Practice Problems |
| Sequences and series | Sigma notation | Summation notation notes |

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)