

Summer Assignment for Rising Multivariable Calculus Students

Multivariable calculus builds on many of the principles from AP Accelerated Calculus BC, and it will be especially important for you to be able to implement all the techniques of integration that we have learned this year.

Lamar University has a concise problem set with solutions for several calculus topics, including integration. The table below consists of four specific integration scenarios that I'd like for you to review. Your assignment is to complete the "Practice Problems" that correlate with each integration topic. Click on the link listed beside each integration topic to see the problem set that you are to complete. You will notice that beside each problem is a link to its solution. Please check your answers and feel free to refer to the solutions if you are stuck on a particular problem.

Integration Topic	Number of Problems	Link to Practice Problem Set
U-substitution	17	Calculus I - Substitution Rule for Indefinite Integrals (Practice Problems) (lamar.edu)
Integration by parts	9	Calculus II - Integration by Parts (Practice Problems) (lamar.edu)
Partial fractions	10	Calculus II - Partial Fractions (Practice Problems) (lamar.edu)
Improper Integrals	10	Calculus II - Improper Integrals (Practice Problems) (lamar.edu)

On the first day of school in the fall, you should have each problem set completed and ready to hand in to Mrs. Fisher. Please label each problem set with the integration topic listed at the top.