

# Quiz 8 - Aug 6th in Tutorial

Quiz 8 will cover Sections 5.3, 5.4, and 5.5.

The format of this quiz is the standard one for this course: A Definition, an Application and a Proof. It will be written in the last 15 minutes of tutorial.

## **Definitions and Statements of Theorems:**

- §5.3: Definition of surface integral for both scalar and vector valued functions.
- §5.4: Definitions of gradient, curl and divergence and Laplacian.
- §5.5: Theorem 5.34 (without proof) and Corollary 5.37.

## **Examples and Applications:**

- §5.3: Be able to perform an example of parameterizing a surface, evaluate the normal vector, calculate the surface area, and find surface integrals of scalar and vector valued functions. Example 1-3, Exercises 1-4, 6-8.
- §5.4: Calculate the various derivatives of various functions. Exercises 1-3.
- §5.5: Exercises 1-3, 5-7.

## **Proofs:**

- §5.3: No proofs.
- §5.4: Exercises 3-9.
- §5.5: Corollary 5.37.