



COMSATS University Islamabad

Attock Campus

Department of Mathematics

Quiz/Assignment # 02

Class: RMT-I

Subject: Advanced Convex Analysis

Instructor: Dr. Atiq ur Rehman

Due Date: 05-03-2019

Course Code: MTH633

Marks: 10

Question # 1

Define vector space over the field $\mathbb{R}$ and give two examples.

Question # 2

Define inner product space and give two examples.

Question # 3

Prove that half spaces in $\mathbb{R}^n$ is convex.

Question # 3

Prove that arbitrary intersection of convex set is convex.

Academic Honesty Requirements:

You are encouraged to work with others in the completion of assignments but it doesn't include copying. However, in the spirit of Academic Honesty, which includes crediting others for their contribution to your work, please include one of the following statements with every submitted assignment on title page:

1. I worked alone on this assignment.
2. I worked with the following: List their full names. Include their relationship to you if they are not also a member of this class.