



COMSATS Institute of Information Technology, Islamabad
Department of Mathematics
Assignment # 4

Program: MS/PhD

Instructor: Dr. M Saeed Akram

Semester:

Deadline: Dec 20, 2016

1. Do Heine-Borel Theorem and Bolzano-Weierstrass Theorem hold for any (possibly infinite dimensional) normed spaces? Prove or disprove your claim. If the answer is not affirmative then discuss the possibilities when Heine-Borel Theorem and Bolzano-Weierstrass Theorem hold. Support your claims by proofs.