

Mohammad Ali Jinnah University

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**Quiz 3**

**Name:** Muhamad Fahad

**Id:** FA19-BSSE-0014

**Subject:** [Linear Algebra (Fall 2020)](https://classroom.google.com/u/0/c/MTgxNTU3ODEwMjQw)

**Section:** AM

**Teacher:** Dr. Asmat Ara

**Date**: Friday, December 11, 2020

Student Name: **Muhammad Fahad** Student I.D. **FA19-BSSE-0014**

Mohammad Ali Jinnah University

**Linear Algebra**

**Quiz 3**

**Morning Program**

**Instructor Name: Dr. Asmat Ara**

**Total Marks:10**

**Date: 9- 12 -2020 Time:**

Q#1 If *V* be the set of all ordered pairs of real numbers, and consider the following addition and scalar multiplication operations on u = *(u*1*, u*2*)* and v = *(v*1*, v*2*)*:

𝑢 + 𝑣 = (𝑢1 + 𝑣1, 𝑢2 + 𝑣2)

𝑘𝑣 = (0, 𝑘𝑣2)

1. Compute u + v and *k*v for u = (2, 1) and v = (2,4), and *k* = 2.
2. V is the standard addition operation on 𝑅2,certain vector space axioms hold for V because they are known to hold for 𝑅2,which axioms are they?
3. Show that Axiom 7, 8, and 9 hold.
4. Show that Axiom 10 fail.

