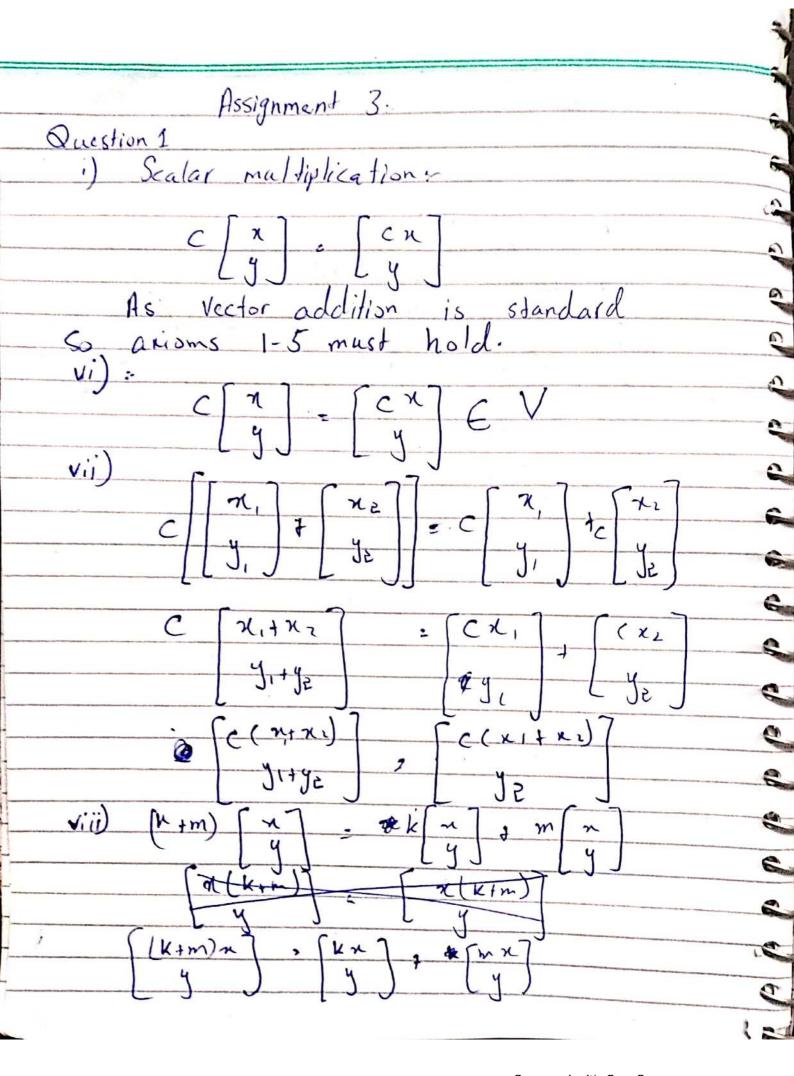


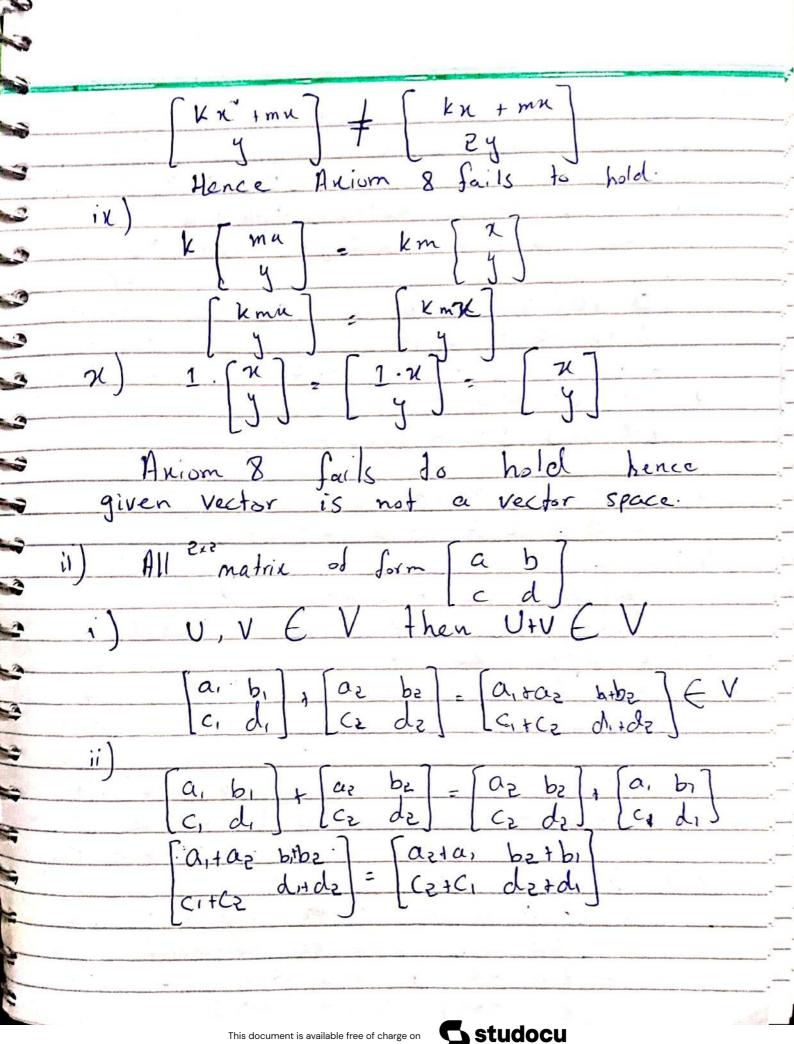
Assignment 2 2020

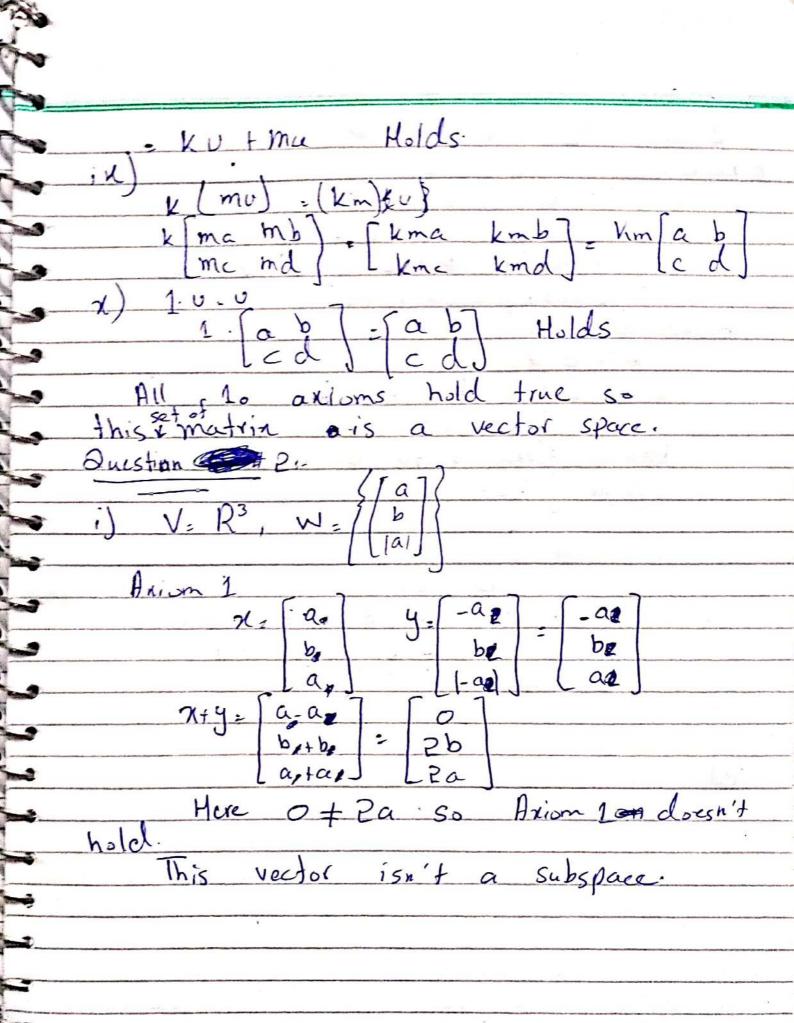
Linear Algebra (National University of Computer and Emerging Sciences)

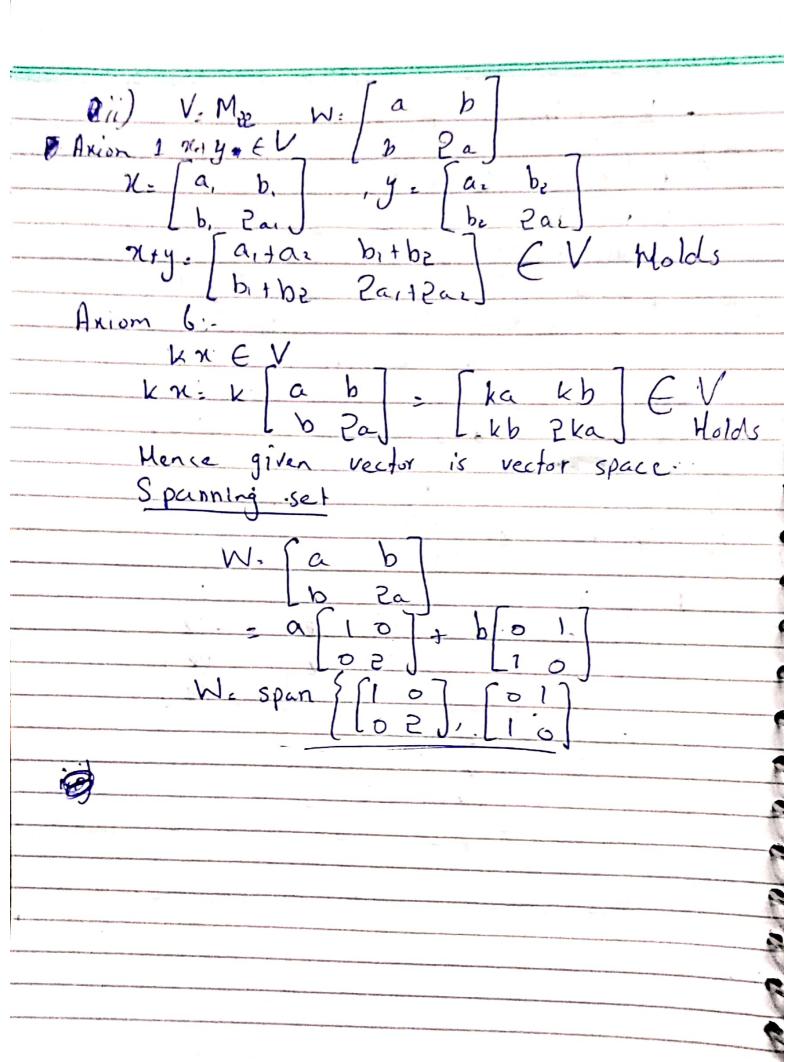
Name: M. Hassan Akbar Roll no: 18I-0564 Course: Linear Algebra

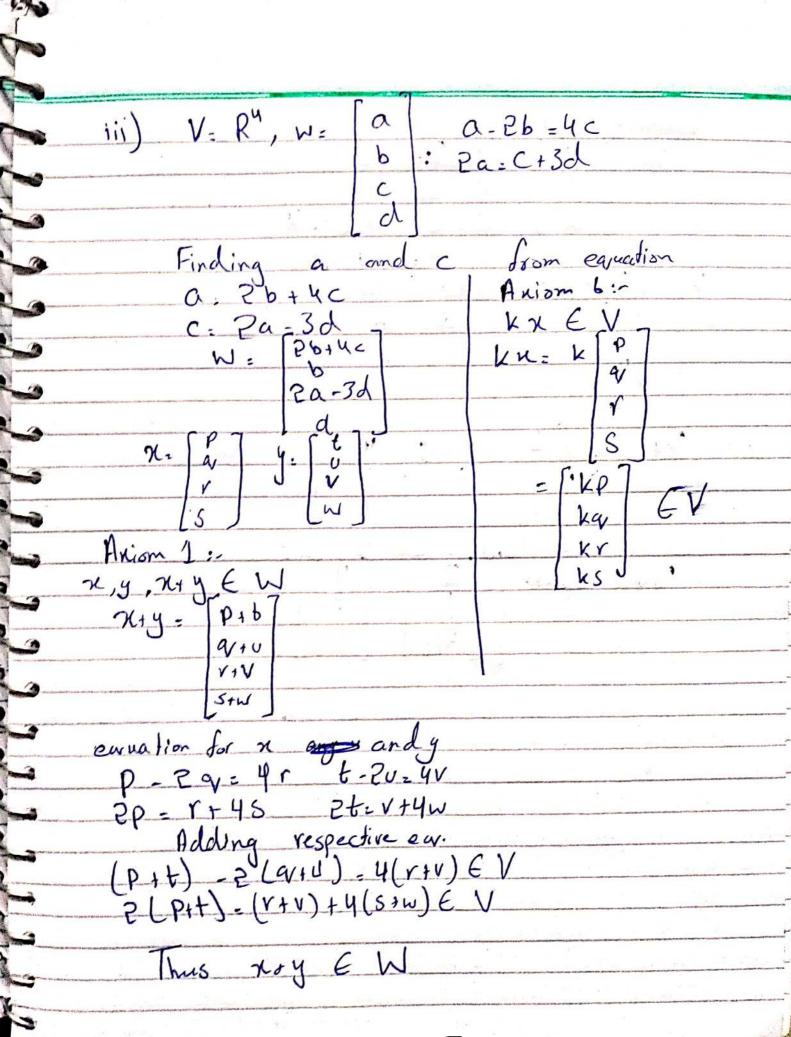
St Section: A Submitted to: Sir Jefan Shah

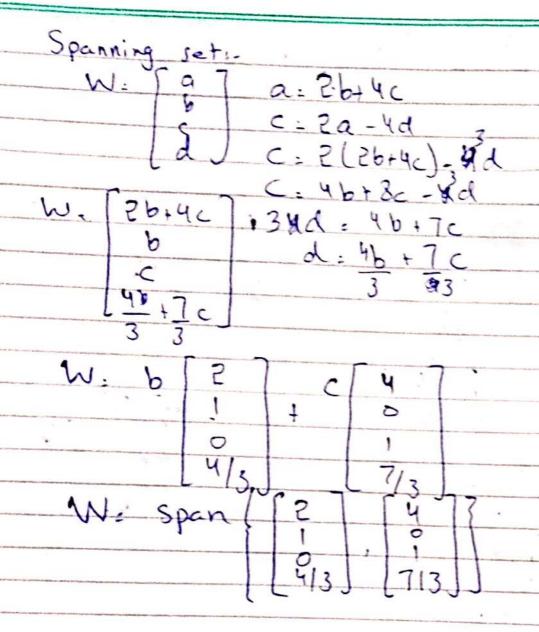








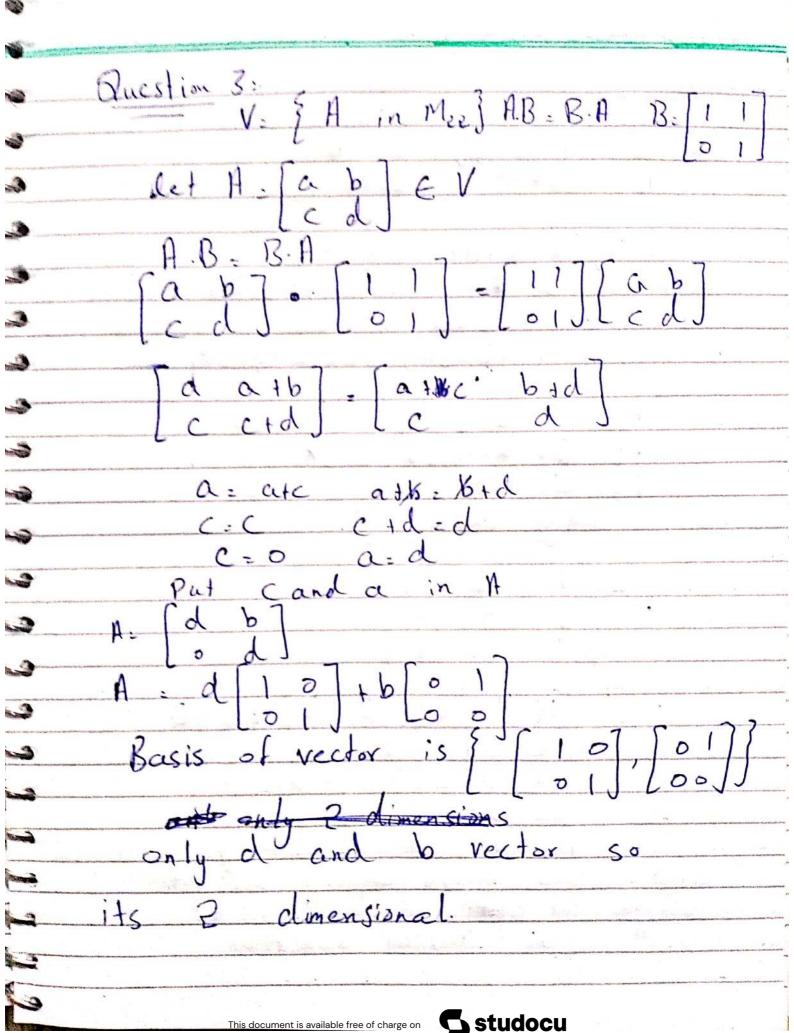




iv) V= { P(n) in P2: rep'(n) = P(s)} Axiom 1 PIN, Q(N) EV PLX + QUN) E V Plujan p'(n) arch). x & gila) Plul + avens = xp(n) + x qoe) : x(P'LN) q'(x)) E DV Holds Axiona 2:-K.P(n) E V K.P(n) = K. n.P'(n) E V Holds Hence P(x) is a subspace. Spanning set: P(x) ax + bx+c @ P(x) = Pan &b x. P(n). nkan 1b) 2. p'(n): 2an2 + b PLNJ: xp(x) an'tbx+c=2ax +bx ani-lanibubute 20 C-ax2 :0 compare coefficients and C=0, a=0 P(n) - bn { x}

V) V= P2, W= { a+bn+cn+: abc=0} P(x): attoricis a.o or(x) coxid is baio b ax + bx + (cid) = P(x) + q(x)

b ax + bx + (cid) = P(x) + q(x) (a) (b) (c+d) 10 Hence Axism 1 doesn't hold and this vector isn't a subspace.



Question 4:
I S. { P. Pz, Pz} is basis for Pz P I tent no . Pz = 2+9x, Pz = 3 + 3x + 4x2
Writing in linear combination W(P,,P2,P3): 0 C,(1+2x+x2)+(2(2+9x)+(3(3+3x+4x1)) C(+2(3x+4x2)+2(2+9(2x+3(3+3(3x+4x1)))) (P,,P2,P3) = (C(+2(2+3(3,2(2x+4(2x+4x1)))))
P1: C1+2C2BC3 =0 P2: 2C1*+9C2*+3(5* =0 P3: C1+4C3 =0
Taking det:- 1 2 3 2 9 3 1 0 4
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
and has unique solution for diff value of PCIC2 and Cs. ACIC2C. = D Will give Hirial Solution.