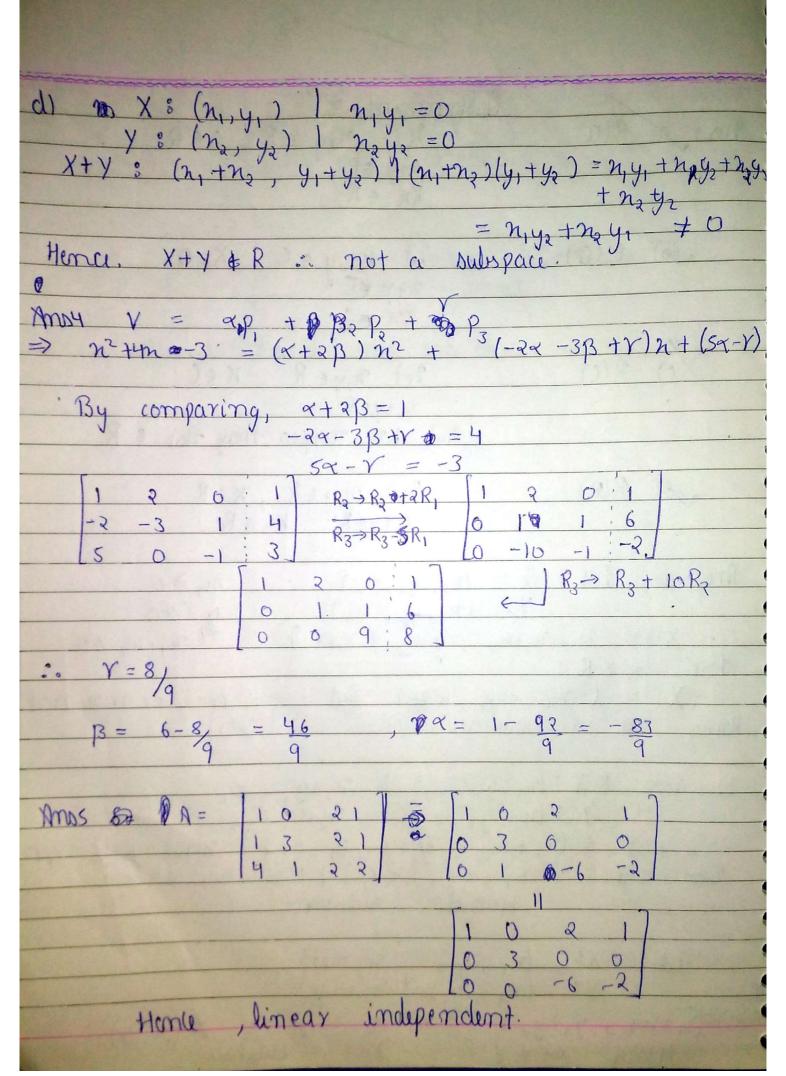
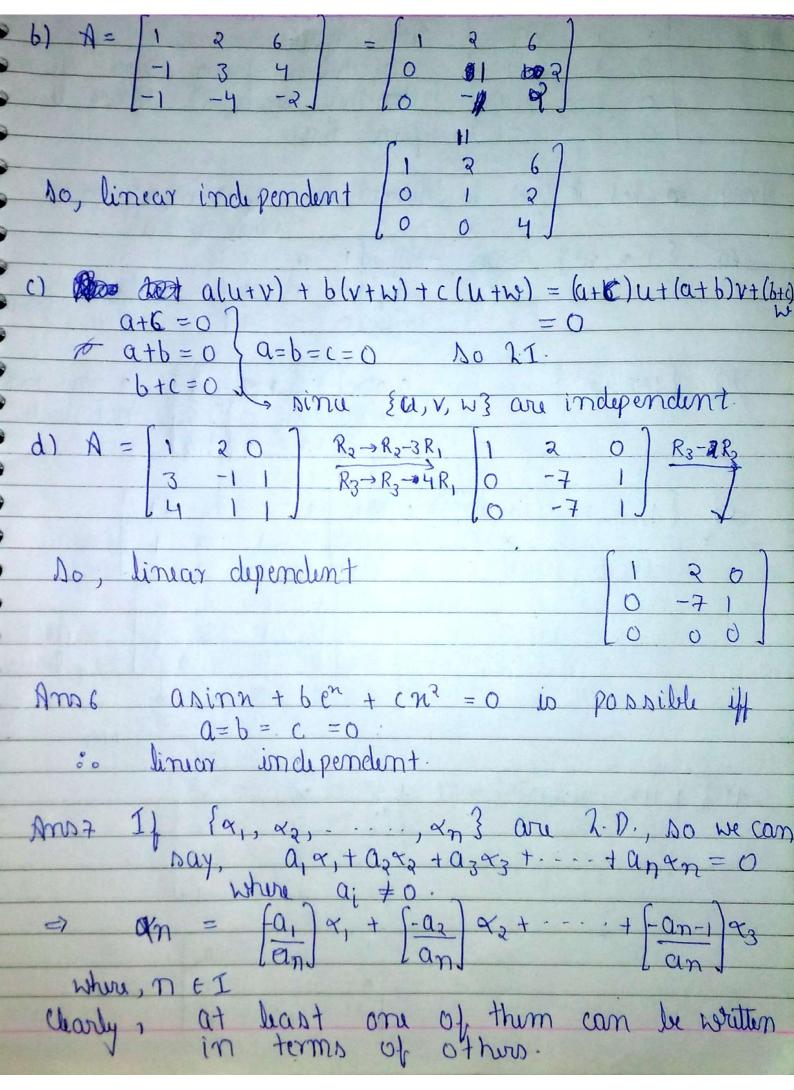
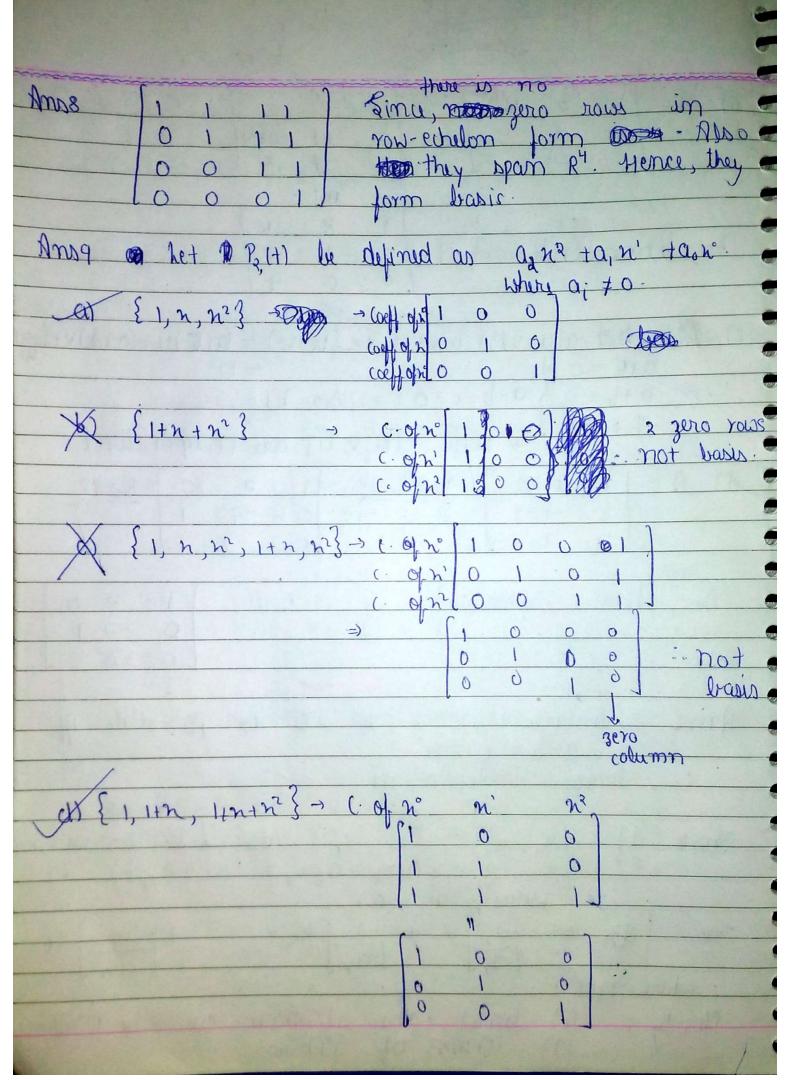
12- trammojaah let ny ER, KGQ Ny GR Ams 1 or R(a) Kn ER 18 ((0) het n, y e C, KeQ kn ec let n,yeR, KEC n+yER (c) R(c) but Kn mayor may not & R di RIR) het n,yer, KER n+yer Kner Mos a) let $X: (n_1, y_1, z_1)$ $n_1 \ge 0$ $y: (n_2, y_2, z_2)$ $n_2 g_1 70$ $x_3 + y_4 = (n_1 + n_2) y_1 + y_2 + z_1 + z_2$ $n_1 + n_2 70$ ax = (an, ay, a #) but an, may or may not Home not a subspace. b) let x: (n, y, z,) | n, +y, = Z, $y: (n_2, y_2, z_2) | n_2 + y_2 = Z_2$ 6. X + Y & (n, +n, , y, +y, , Z, + Z,) | n, +n, +y, +y, = Z, +3 Too ax : (4n, , ay, , 4Z,) | 4n, + 4y, = 4Z, TER Hence subspace c) Let X^2 (n_1, y_1) $| n_1 = y_1^2$ Y^2 (n_2, y_2) $| n_2 = y_2^2$ $(x_1 y_2)(n_1 + n_2)$ $| * n_1 + n_2 = y_1^2 + y_2^2 \neq (y_1 + y_2)^2$ Hence $x + y \notin R$... Not a subspace







zero vecto x > zero dimenaion Ans 10 Dimension -2X3 = 6 7 (m+1) 2. n(n+1) Ano 11 Mana = Clearly, one row is zero, som two rows will Hena, dimin sion = 02 basis of Ano 12 A = 1 0 3 1 : K-3=0

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Amos a) To prove to vector ppace -
     If(n) + q(n) + = (f+q)(n) - given
      from = r for - liver
     (+4)(n) + h(n) = f(n) + (q+h)(n)
      Let O(n) be a par vector set. O(n) = O(n) + \log(n)
           f(n) + O(n) = (f+O)(n) = f(n)
 iv) f(n) + (+1) (n) = (f+(-f)) (n) = 0 (n) = 0
 v) f(n) + g(n)' = f(g)(n) = (g(f)(n) = g(n) + f(n)

vi) 1 - f(n) = (1 + f)(n) = f(n)
 VII) ( ((x+B) flow) = (x+B) flow) = (x+B) (n) + (x+B) flow)
  vii) ((\alpha\beta)f) ((\alpha)) = (\alpha)f(\alpha) = (\alpha)f(\alpha)
    6) let fin & gin be two functions on [a, b]:
i) Stindn + Sgindn = Ifinityon)dn
        ii) & Sfin dn = Sefin dn = Sefin dn
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