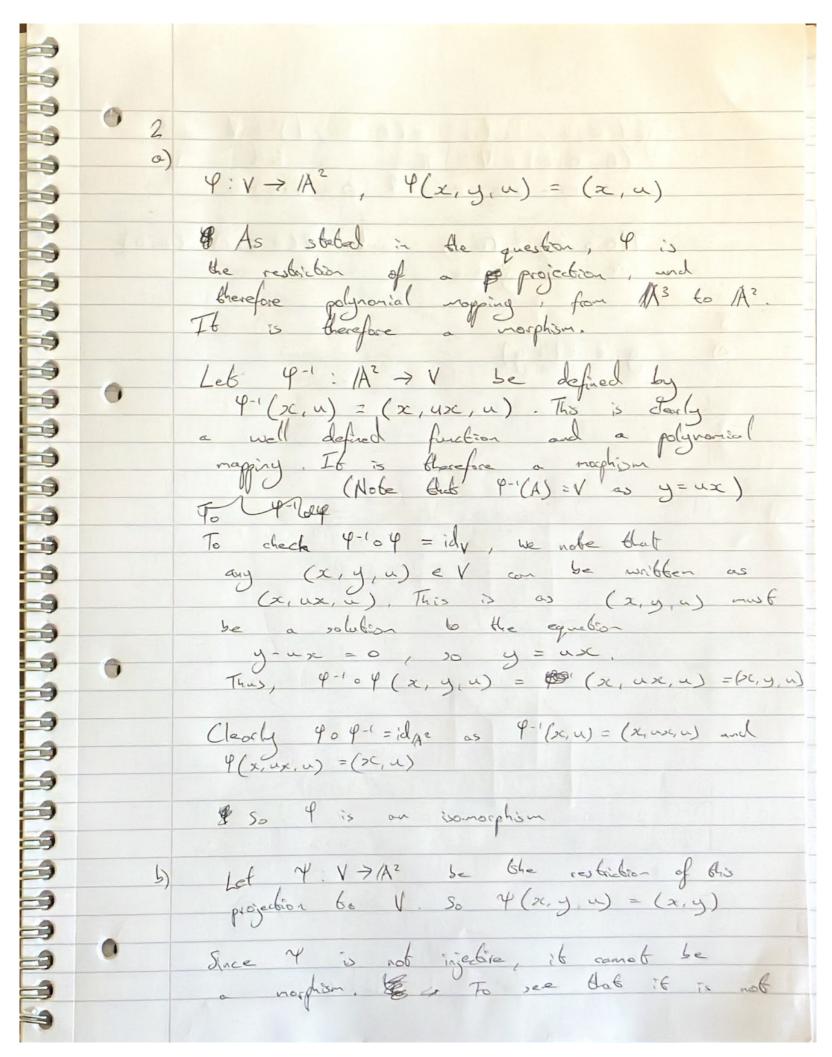


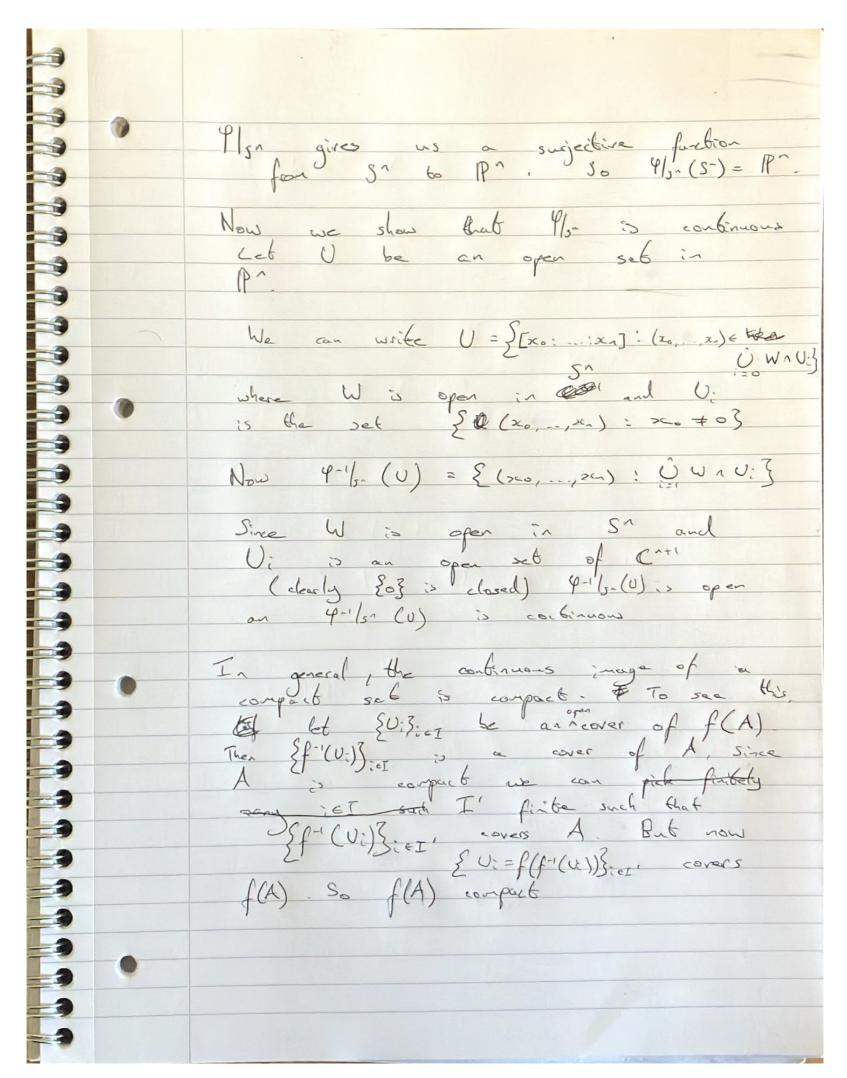
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injective, consider (0,0,1) eV and (0,0,0) eV. These we both in V as 0-0x0=0 and 0-0x1=0. Y(0,0,0) = (0,0) and Y(0,0,1)=(0,0) I not injective for doesn't pass through any of the points. Neither does fz. for and for pass through [0:1:0] For in b we must be able to write  $g(x,y) = ax^2 + by^2 + c$ We show that IP's compact profession of a continous function from S'= { z < C^+1: |z|| = 1} (an obviously compact Charge Let 4: cn-1 -> 1Pn be defined by 4(zo, zn) = [zo zn]

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B. Wy -sinx) == P2 compact we need [x:y:z] to satisfy

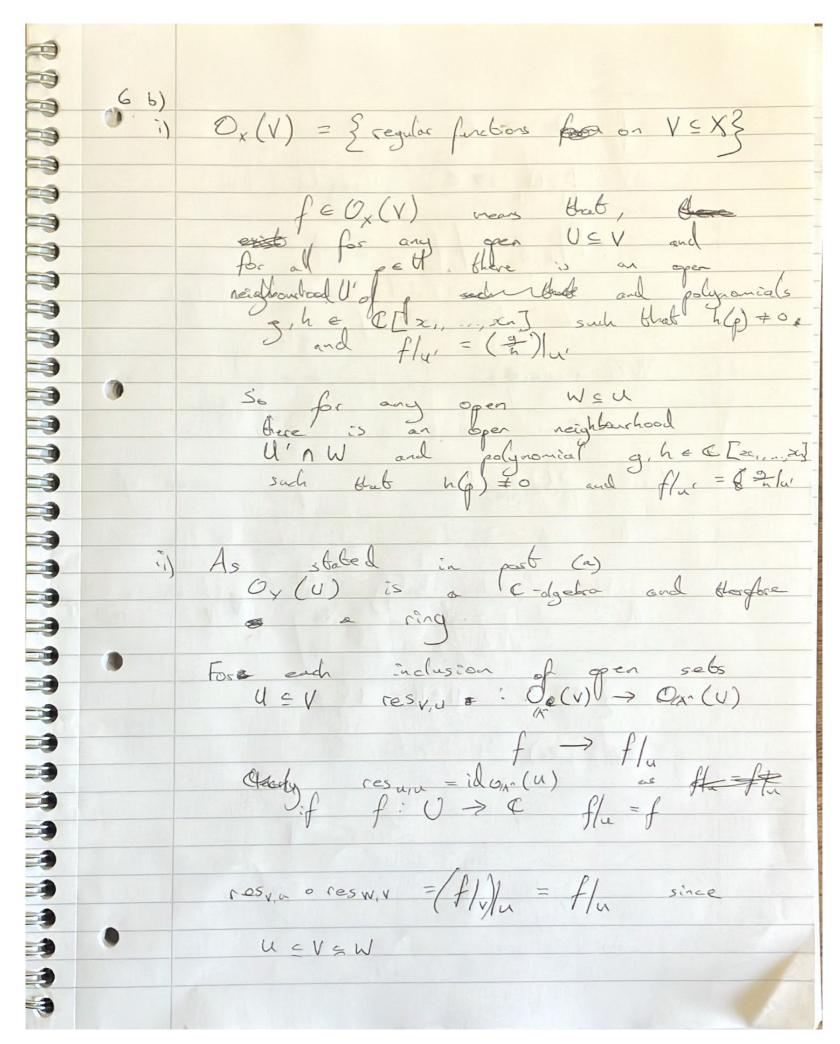
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Since the nullity of (az 5, cz) is

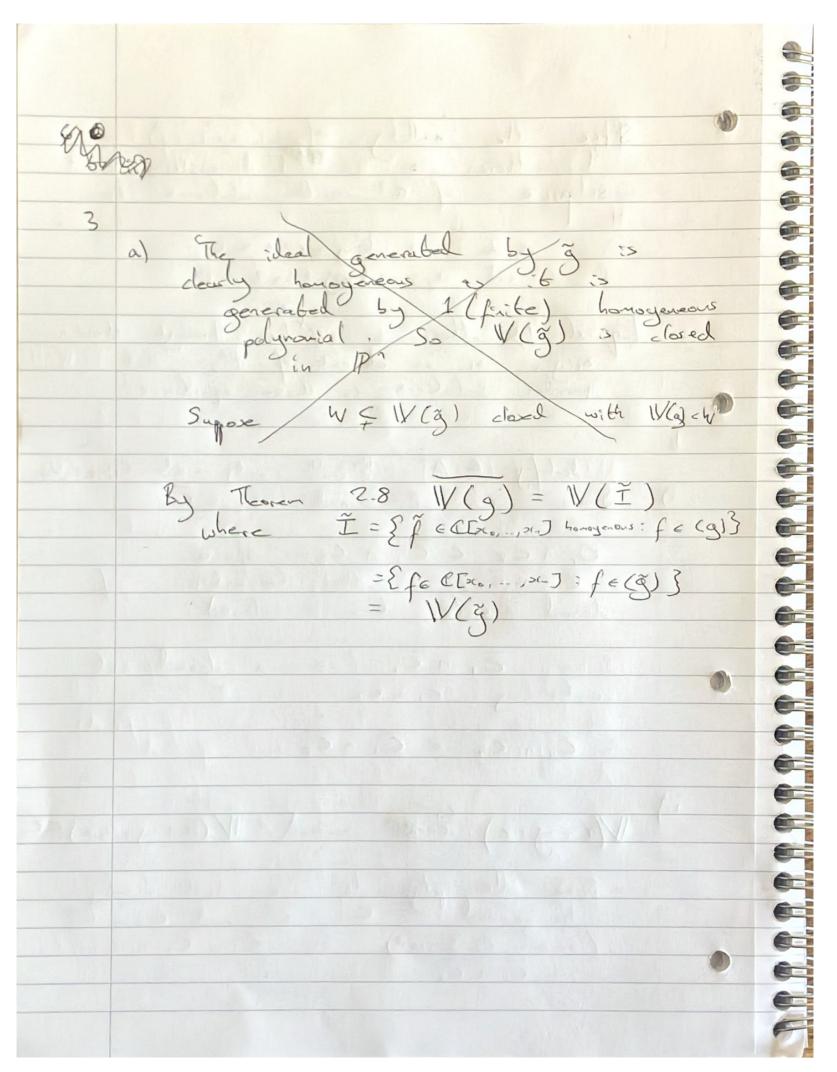
1, there is a II-dimensional

subquee of C3 with solutions to a x + b, y + c, z = 0 and a se + b = y + c = = 0 Equidently there is a line through the origin, or on element of PZ that provides solutions to these equitions. Identify & An with Uo and consider GCZCUO Since C, CC, and CZCEZ C, n Cz C C, n Cz. Since C, n Cz is the intersection of dosed sets, it is closed. Since Conta is a closed set containing cinca CINC2 C CINC2 W(x+y+z)= and W(x+y+2=)=c Since the polynomials are Joth dready hongerised C, = E, and Cz = Ez (see Q3 (a)). So C, r Cz = C, r Cz

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