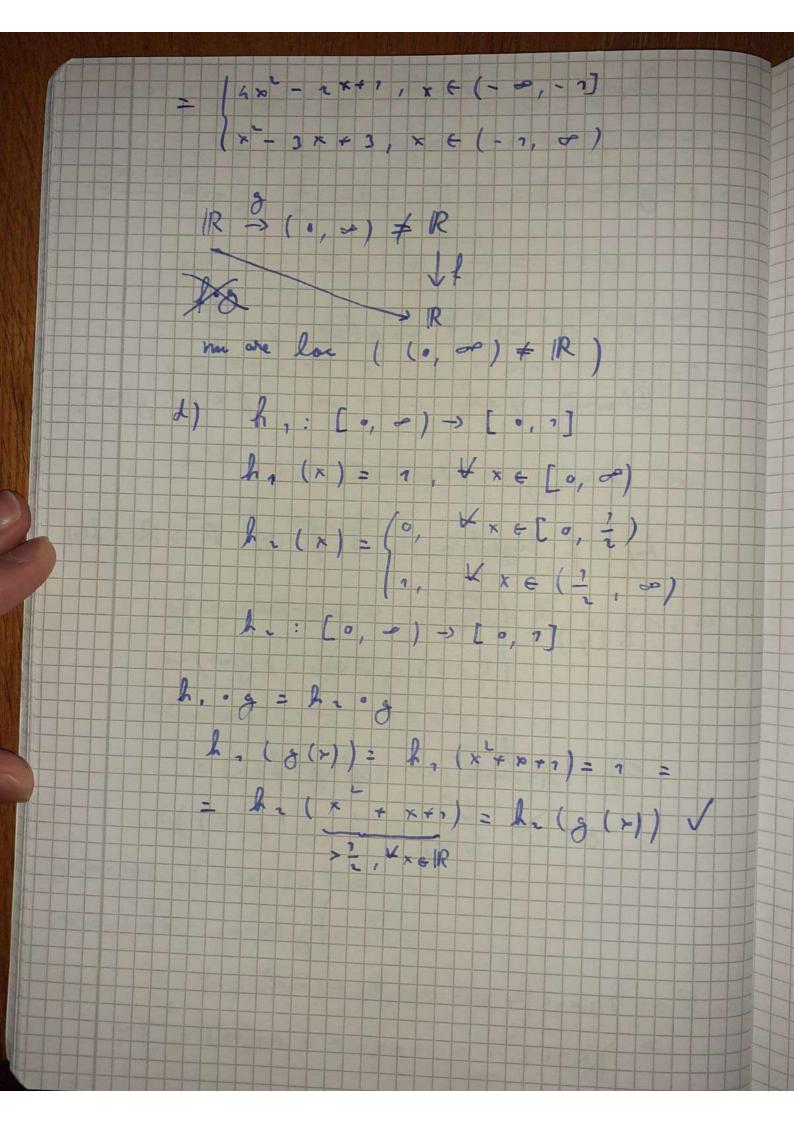
16.02.2021 Eusiac Andrei Er. 212 Juorde la algebra (1) a) 6 relatie de echimalenta = o preordine, que o multime A, core este pi si-Lunitie injection = o functie f: A -> B, astfel in cat $\forall \times, \times, \in A, \times, \neq \times, \text{ implica}$ $f(\times,) \neq f(\times,)$ Julinel = or outmentine Sa lui R, ou (R,+,) inel, au graprietatea ci + x, y & S, implică X. y pi X+ y & S, iar cu operatible in-Linich independento = a listo de nectori ~= [v, v, , , va] t t V", V m K-spatin vectorial rade patisface: «, v, + +, v, +... + t & v = o implica « = = = = = = o, en

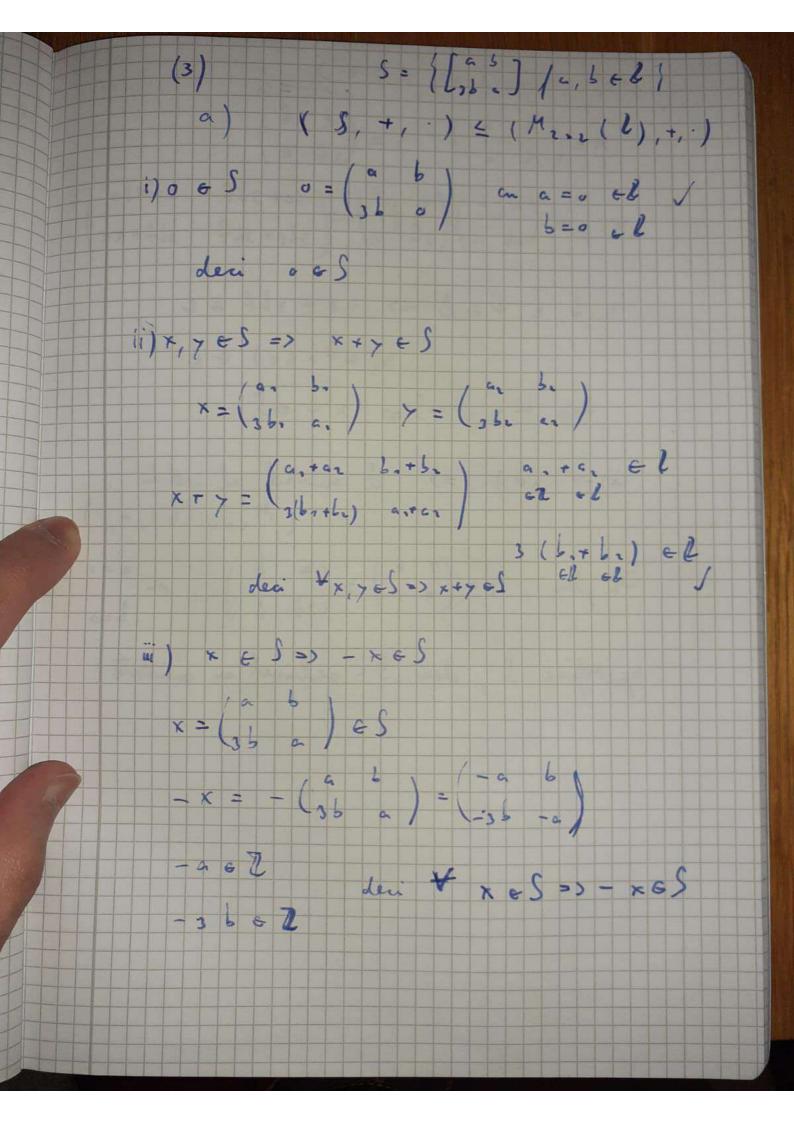
(h) Talmettine a mei muttimi erdonate cate mate infimum: G = Z, G=(-s, o] in (2, ≤) Elevent de ordin 2 in IR : -1 (-1=7)

(-) $f: \mathbb{R} \rightarrow \mathbb{R}, f(x) = \begin{cases} (-1), \times \circ(-2), -1 \end{cases}$ g: (R -> (0, -), g (x)=x+x+, a) fingectine L=> + x, x = 1R, x, \$ x2 >> => f(x,) * f(x) Bognl i: x, x, t (-2, -7], x, + x. f (×1) = 2×1-1 2×1-1 ≠ 2×2-1 2×, ≠ 2×2 / × 2 × 2 f(x2)=2×2-7 band 1 : x, € (--, -1], x, € (-1, -) emident x, + x2 f(x,)=2x,-1 Lx, - ? # x2-2 1 (x2) = x2-2 - 1 L X 2 ×, <-1 4 × 2-1 - 2 4 x 2 - 7 - 1 2 x 2 - 7 >> K1 # -- / bord is: x, x, E (- 1, 5), x, 7 xa 1 (x1) = x1 - 2 x, -2 + x_-2 K, 4 KL V K (x 1) = x 2 - 2 -> k injection

f myestin &> & y e R, & x e R a. i. y= f(x) f(x)= (x-2, xe(-0,-1) (x-2, xe(-1,-0) y = 2x - 1 = 2 x = -1 = 2 => y = - 3 = 2 y = (- 0, - 1] y = x - 1 => x = y + 2 > -1 => 7 € (-3,0) => + y 6 1R ecnopia y = f(r) are loc -> & sorjectini & injection (a) + x, x, = 1R, x, + x, =) => f(x,) f g(x,) Observen : g (1) = 1 + 1 + 1 = 3 8(-1)=(-2)-4+1=4-1=> 8 (1) = 8 (-1) Deci g & injection g subjective to \$ 7 0 (0, 5),) KG |R ale Y= 8 (x)

Oliserum & perelati on a x , 427 20 2 => gelabeti en raiful ni gos (1) 8 (- 1) = 8 (- 1) = 1 - 2 - 1 = 1 - 2 - 1 = 1 = 1 = = (2) (1), (2) => + y=g(x), y= 3 Observe y = = = (0,0), \$ x a.r. g(x)=== Den g + subjection L) f higietin -> 3 f (y): 12 -> 12 = 24/ h(y) = (+2, y + (-0, -3) c) $\mathbb{R}^{\frac{1}{2}}\mathbb{R}^{\frac{1}{2}}$ $\mathbb{R}^{\frac{1}{2}}$ \mathbb{R} = (g(Lx-1), xe(-0,-1] | g (x-2), x = (-1, -) $= ((2x-1)^{\frac{1}{2}} + 2x-2+1, x \in (-9, -1]$ $= (x-1)^{\frac{1}{2}} + x-1+1, x \in (-7, \infty)$





iv) x, y a S = > x 7 & S x = (31 a) y = (e f) x. 7 = (3 b) (e) f) ae+3bf af+be

x. 7 = (3b a) (3f e) = (3be+3af 3bf+ae a, b, e, f & 2 => ae + 3 L f & 2 3(4+be) EL deci 4 x, y of 3 x y es i) -> iv) => Soutiful al intlatai

(M. r. (b), f,) 32 yles, 1 = (2) = (2 b), on 2 = 1 apartine S, der S- sulivel en mitate

