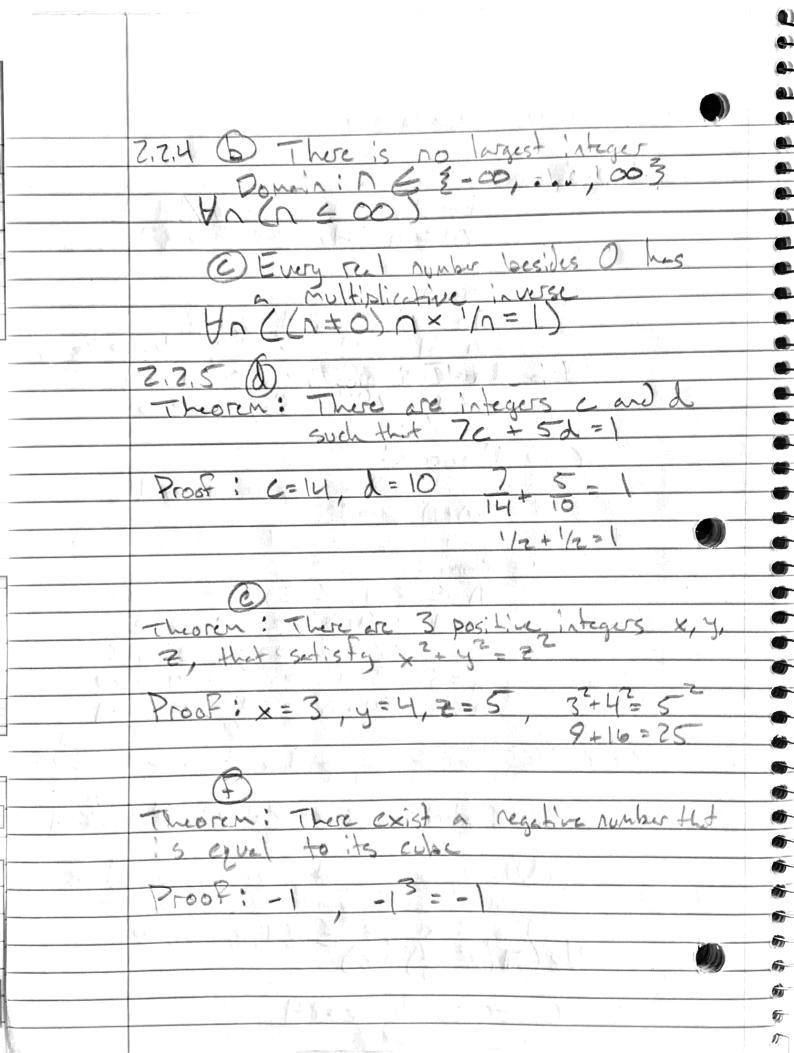
CS 278 Lab 5 For every integer of such that

0 < 0 < U, Zen+25 > 30 IF n E Z-10,13 N=-1, Z(1+2) >30; L/ >1/3 N=0, Z(1+2) >30; L/ >1 N=1, Z(1+2) >31; 8>3 For all positive integers A 21 (N+1)3 = 3 $N \in \{1, 2, 3, 4\}$ $N \in \{1, 2, 4\}$ $N \in \{1, 4, 4\}$ N7.2.2 @ For every positive integer x, x322 Counterexample: X= Z; Z3LZ 8 XL DEVery positive integer can be expressed as

sum of the squeres of two integers

Done in x y Z E 21, 2, 1, 00 3

Uz (= (x2+y2)=z) Counter example: 2=24



3 S 3 3 Theoren : For every pair of real numbers; x and 3 y, there exists a teal number & such that 3 2 -3 Proof: x-2=2-4 1 X-2+4=2 X+4= 2= Z= (x+4)/2 -3 3 there will always satisfy a real number 2 that satisfies this equation 3 3 3 2.2,6 Theorem: There exists an integer that is smaller than every other integer counterexample: . In (n & & all integers } Because there are infinite integers in the Set, there can not be an integer that is greater than or less than every other integer in Theoren: There are positive integers mand a suda that John = Jom + Jo counterexample: 4M, n E & 1,2, ... 3 (JM+n & JM+Jn)