(a) let n be an arbitrary element in 2. X-Y+Y=X Set (X/sy)) Usy), as shown in left (X/[n]) U[n] n satisfies: (nex) v(nesy), there = [x:(xex)/(x+19)] U[x: xe19)} exists a condition that n=y and 19#X, which means n#X : 3x (1xe(xisysusys))/ 7(xex) = [x: (xex) v(xesy)) \ ((x \ sy)) v (xesy))) TX T/TXE(XISYJUSYI)V(XEX7) = [x: ((XEX)V(XESY))) AT] THX (XE(X)Sylvigs) > XEX) = {x: (xex)v(xesy)) 小(X/(y))U(y) 丰X Cb) let n be an our bitrary element in Set X, : XEX, as definition. It is also an element of (XEX) V (XE sys), which is (X/sys) Usys in AX(XEX-> (XE(XAFY))USYS)) in X = (X/SYS)USYS 3. Power 9015 (a) Consider following example SUT= \1.2.3} P(SUT) = (m.521.13). 51.21. (1.31.52.3). S: §1,23 P(S)=[11,121,10] 11.2.3).00) T: [2,3] P(T)=[12], [3], [2,3], [0] as shown, \$1,2,3) and \$1.3) are elements SNT=[2] P(SNT)=[[2],0] of PCSUT) but hot P(S)UP(F)UP(S)T) : PCS)UPCT)UP(SOT) = [SIIS2][3][112][2.3], Ø) : PCSUT) + PCS)UPCT)UP(SOT) (b) as definition (2) let n be an arbitrary element of PENT), by definition of subset O SAT=[X:(XES) A(XEB)] it should also be element set of PCS) and PCT) i. nePosit) > nePositiePot) = ne PositiPot) : SATES SATET 3 lot m be an arbitrary element set of 1Pcs) 1P(T)) SNT is subset of both S and T which means in should be both subset of S and ithe Subset of SNT is also Subsets Subset of T, so elements of m should be in SandT of S and subsets of () (if an element is just in S but not in T. It will not : P(SAT) SP(S) P(SAT) SPET) be an element of sebsatiofT): mE PISAT)
: ME(PIS) A PIT) -> ME PISAT) @ as shown above, P(SMT) = PGS) () PCT)