Exercise 1 (0,5 × 4 1) e) If v is a node of arity 2, then one of the following holds: (i) & has right-hand label (>E), and there are formulas of and 4 such that & has the left label 4, and the left labels on the daughters of v are, from left to right, φ and (φ -> ψ) (ii) > has right-hand label (NI), and there are formulas 2) \$ and 4 such that > has the left label (\$14), and the left labels on the daughters of vare, from left to right, of and y. (iii) & has night-hand label (IE) and there is a formula of such that & has the left label I, and the left labels on the daughters of I are, from left to right, \$ and (TO) (iv) & has right-hand label ( I) and there are formulas of and youch that v has the left label ( 0 = 4), and the left labels on the daughters of vare from left to right,  $(\phi \rightarrow \psi)$  and  $(\psi \rightarrow \phi)$