

# l2\_trees\_9 (TMEsQjqbzvVMW- gYSsNw5pEf1nVWNFis9oQM)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ & X1)))) \Rightarrow (((k3\_finseq\_1 X0 = k3\_finseq\_1 X1) \wedge (\forall X2.(v7\_ordinal1 \\ & X2) \Rightarrow ((X2 \in k4\_finseq\_1 X0) \Rightarrow (k1\_funct\_1 X0 X2 = k1\_funct\_1 X1 X2)))) \Rightarrow \\ & (X0 = X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k4\_finseq\_1 X0 = k9\_xtuple\_0 X0) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ & X1))) \Rightarrow (\neg (X0 \in k4\_finseq\_1 X1) \wedge (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow \\ & (\neg (X0 = k2\_nat\_1 X2 np\_1) \wedge (\neg r1\_xxreal\_0 (k3\_finseq\_1 X1) X2)))) \end{aligned} \tag{3}$$

## Theorem 1

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ & X1)))) \Rightarrow (((k3\_finseq\_1 X0 = k3\_finseq\_1 X1) \wedge (\forall X2.(m1\_subset\_1 \\ & X2 k5\_numbers) \Rightarrow ((\neg r1\_xxreal\_0 (k3\_finseq\_1 X0) X2) \Rightarrow (k1\_funct\_1 \\ & X0 (k2\_nat\_1 X2 np\_1) = k1\_funct\_1 X1 (k2\_nat\_1 X2 np\_1)))))) \Rightarrow ( \\ & X0 = X1))) \end{aligned}$$