

# t3\_l\_hospit

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_limfunc2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_limfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v2\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $k2\_seq\_2 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_prob\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k1\_numbers k1\_numbers)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k1\_numbers) \Rightarrow \\ & ((r1\_limfunc2 X0 X1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k1\_numbers) \Rightarrow \\ & ((X2 = k1\_limfunc2 X0 X1) \Leftrightarrow (\forall X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 \\ & X3 k5\_numbers k1\_numbers) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers k1\_numbers)))) \Rightarrow (((v2\_comseq\_2 X3) \wedge ((k2\_seq\_2 X3 = \\ & X1) \wedge (r1\_tarski (k2\_relset\_1 k1\_numbers X3) (k9\_subset\_1 k1\_numbers \\ & (k1\_relset\_1 k1\_numbers X0) (k10\_prob\_1 X1)))) \Rightarrow ((v2\_comseq\_2 \\ & (k8\_funct\_2 k5\_numbers k1\_numbers k1\_numbers X3 X0) \wedge (k2\_seq\_2 \\ & (k8\_funct\_2 k5\_numbers k1\_numbers k1\_numbers X3 X0) = X2))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k1\_numbers k1\_numbers)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k1\_numbers) \Rightarrow \\
& ((r1\_limfunc2 X0 X1) \Leftrightarrow ((\forall X2.(m1\_subset\_1 X2 k1\_numbers) \Rightarrow \\
& (\neg(\neg r1\_xxreal\_0 X1 X2) \wedge (\forall X3.(m1\_subset\_1 X3 k1\_numbers) \Rightarrow \\
& (\neg(\neg r1\_xxreal\_0 X3 X2) \wedge ((\neg r1\_xxreal\_0 X1 X3) \wedge (X3 \in k1\_relset\_1 \\
& k1\_numbers X0)))))) \wedge (\exists X2.(m1\_subset\_1 X2 k1\_numbers) \wedge \\
& (\forall X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& (((v2\_comseq\_2 X3) \wedge ((k2\_seq\_2 X3 = X1) \wedge (r1\_tarski (k2\_relset\_1 \\
& k1\_numbers X3) (k9\_subset\_1 k1\_numbers (k1\_relset\_1 k1\_numbers \\
& X0) (k10\_prob\_1 X1)))))) \Rightarrow ((v2\_comseq\_2 (k8\_funct\_2 k5\_numbers \\
& k1\_numbers k1\_numbers X3 X0) \wedge (k2\_seq\_2 (k8\_funct\_2 k5\_numbers \\
& k1\_numbers k1\_numbers X3 X0) = X2))))))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v1\_funct\_1 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k1\_numbers k1\_numbers)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k1\_numbers) \Rightarrow \\
& (\forall X2.(m1\_subset\_1 X2 k1\_numbers) \Rightarrow (((r1\_limfunc2 X0 X1) \wedge \\
& (k1\_limfunc2 X0 X1 = X2)) \Rightarrow ((\forall X3.(m1\_subset\_1 X3 k1\_numbers) \Rightarrow \\
& (\neg(\neg r1\_xxreal\_0 X1 X3) \wedge (\forall X4.(m1\_subset\_1 X4 k1\_numbers) \Rightarrow \\
& (\neg(\neg r1\_xxreal\_0 X4 X3) \wedge ((\neg r1\_xxreal\_0 X1 X4) \wedge (X4 \in k1\_relset\_1 \\
& k1\_numbers X0)))))) \wedge (\forall X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 \\
& X3 k5\_numbers k1\_numbers) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k5\_numbers k1\_numbers)))))) \Rightarrow (((v2\_comseq\_2 X3) \wedge ((k2\_seq\_2 X3 = \\
& X1) \wedge (r1\_tarski (k2\_relset\_1 k1\_numbers X3) (k9\_subset\_1 k1\_numbers \\
& (k1\_relset\_1 k1\_numbers X0) (k10\_prob\_1 X1)))))) \Rightarrow ((v2\_comseq\_2 \\
& (k8\_funct\_2 k5\_numbers k1\_numbers k1\_numbers X3 X0) \wedge (k2\_seq\_2 \\
& (k8\_funct\_2 k5\_numbers k1\_numbers k1\_numbers X3 X0) = X2)))))) \wedge \\
& (((\forall X3.(m1\_subset\_1 X3 k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0 X1 \\
& X3) \wedge (\forall X4.(m1\_subset\_1 X4 k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0 \\
& X4 X3) \wedge ((\neg r1\_xxreal\_0 X1 X4) \wedge (X4 \in k1\_relset\_1 k1\_numbers X0)))))) \wedge \\
& (\forall X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 k5\_numbers k1\_numbers) \wedge \\
& (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
& (((v2\_comseq\_2 X3) \wedge ((k2\_seq\_2 X3 = X1) \wedge (r1\_tarski (k2\_relset\_1 \\
& k1\_numbers X3) (k9\_subset\_1 k1\_numbers (k1\_relset\_1 k1\_numbers \\
& X0) (k10\_prob\_1 X1)))))) \Rightarrow ((v2\_comseq\_2 (k8\_funct\_2 k5\_numbers \\
& k1\_numbers k1\_numbers X3 X0) \wedge (k2\_seq\_2 (k8\_funct\_2 k5\_numbers \\
& k1\_numbers k1\_numbers X3 X0) = X2)))))) \Rightarrow ((r1\_limfunc2 X0 X1) \wedge (k1\_limfunc2 \\
& X0 X1 = X2))))
\end{aligned}$$