

## t35\_lpspace2

(TMWo2q5zbn5XiLQoZuoqv6GE9LjozzcFT5)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_prob\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_prob\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_numbers : \iota$  be given. Let  $v10\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v6\_supinf\_2 : \iota \Rightarrow o$  be given. Let  $v4\_measure1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_lpspace2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_mesfun6c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k56\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge \\
 & ((v1\_prob\_1 X1 X0) \wedge ((v4\_prob\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
 & (k1\_zfmisc\_1 X0)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
 & X2 X1 k7\_numbers) \wedge ((v10\_valued\_0 X2) \wedge ((v6\_supinf\_2 X2) \wedge ((v4\_measure1 \\
 & X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 k7\_numbers)))))) \Rightarrow \\
 & (\forall X3. ((v2\_xxreal\_0 X3) \wedge (m1\_subset\_1 X3 k1\_numbers)) \Rightarrow \\
 & (k1\_lpspace2 X0 X1 X2 X3 = ReplSep (toset (\lambda X4 : \iota. (v1\_funct\_1 \\
 & X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers)))))) \\
 & (\lambda X4 : \iota. \exists X5. (m2\_subset\_1 X5 (k1\_zfmisc\_1 X0) X1) \wedge \\
 & ((k1\_funct\_1 X2 (k3\_subset\_1 X0 X5) = k6\_numbers) \wedge ((k1\_relset\_1 \\
 & X0 X4 = X5) \wedge ((r1\_mesfunc6 X0 X1 X4 X5) \wedge (r3\_mesfunc6 X0 X1 X2 (k2\_mesfun6c \\
 & X3 X0 (k56\_valued\_1 X0 k1\_numbers X4)))))) (\lambda X4 : \iota. X4)))))) \\
 & \hspace{15em} (1)
 \end{aligned}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\ & ((v1\_prob\_1 X1 X0) \wedge (v4\_prob\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 X0)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ & X2 X1 k7\_numbers) \wedge (v10\_valued\_0 X2) \wedge (v6\_supinf\_2 X2) \wedge ((v4\_measure1 \\ & X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 k7\_numbers)))))) \Rightarrow \\ & (\forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 k1\_numbers)))) \Rightarrow (\forall X4.((v2\_xreal\_0 X4) \wedge (m1\_subset\_1 \\ & X4 k1\_numbers)) \Rightarrow (\neg (X3 \in k1\_lpspace2 X0 X1 X2 X4) \wedge (\forall X5.(m2\_subset\_1 \\ & X5 (k1\_zfmisc\_1 X0) X1) \Rightarrow (\neg (k1\_funct\_1 X2 (k3\_subset\_1 X0 X5) = k6\_numbers) \wedge \\ & ((k1\_relset\_1 X0 X3 = X5) \wedge (r1\_mesfunc6 X0 X1 X3 X5)))))))))) \end{aligned}$$