

## t34\_mesfun7c

(TMdBcuaE1Bmp8kdEoNe9z7gww7Xd7u5sLTR)

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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  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_mesfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge \\
 & ((v1\_prob\_1 X1 X0) \wedge ((v4\_prob\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
 & (k1\_zfmisc\_1 X0)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
 & X2 X1 k7\_numbers) \wedge ((v10\_valued\_0 X2) \wedge ((v6\_supinf\_2 X2) \wedge ((v4\_measure1 \\
 & X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X1 k7\_numbers)))))) \Rightarrow \\
 & (\forall X3. ((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & X0 k7\_numbers)))) \Rightarrow (\forall X4. ((v1\_funct\_1 X4) \wedge (m1\_subset\_1 \\
 & X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k7\_numbers)))) \Rightarrow (((v6\_supinf\_2 \\
 & X3) \wedge ((v6\_supinf\_2 X4) \wedge (\forall X5. (m1\_subset\_1 X5 X0) \Rightarrow ((X5 \in \\
 & k1\_relset\_1 X0 X4) \Rightarrow (r1\_xxreal\_0 (k12\_supinf\_2 X4 X5) (k12\_supinf\_2 \\
 & X3 X5)))))) \Rightarrow ((\forall X5. (m2\_subset\_1 X5 (k1\_zfmisc\_1 X0) X1) \Rightarrow \\
 & (\neg (X5 = k1\_relset\_1 X0 X3) \wedge ((X5 = k1\_relset\_1 X0 X4) \wedge ((r1\_mesfunc1 \\
 & X0 X1 X3 X5) \wedge (r1\_mesfunc1 X0 X1 X4 X5)))))) \vee (r1\_xxreal\_0 (k6\_mesfunc5 \\
 & X0 X1 X2 X4) (k6\_mesfunc5 X0 X1 X2 X3))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\
& ((v1\_prob\_1 X1 X0) \wedge ((v4\_prob\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& (k1\_zfmisc\_1 X0)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
& X2 X1 k7\_numbers) \wedge ((v10\_valued\_0 X2) \wedge ((v6\_supinf\_2 X2) \wedge ((v4\_measure1 \\
& X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 k7\_numbers)))))) \Rightarrow \\
& (\forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& X0 k1\_numbers)))) \Rightarrow ((v6\_supinf\_2 X3) \Rightarrow ((\forall X4.(m2\_subset\_1 \\
& X4 (k1\_zfmisc\_1 X0) X1) \Rightarrow (\neg(X4 = k1\_relset\_1 X0 X3) \wedge (r1\_mesfunc6 \\
& X0 X1 X3 X4)) \vee (k1\_mesfunc6 X0 X1 X2 X3 = k6\_mesfunc5 X0 X1 X2 (k1\_mesfunc5 \\
& X0 X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v3\_valued\_0 X0))) \Rightarrow (k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v2\_valued\_0 X0))) \Rightarrow (k12\_supinf\_2 X0 X1 = k1\_funct\_1 X0 X1) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((v1\_funct\_1 X1) \wedge ( \\
& m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers)))) \Rightarrow \\
& ((v1\_funct\_1 (k1\_mesfunc5 X0 X1) \wedge (m1\_subset\_1 (k1\_mesfunc5 \\
& X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k7\_numbers))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers)))) \Rightarrow (k1\_mesfunc5 X0 X1 = X1)) \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge \\
& ((v1\_prob\_1 X1 X0) \wedge ((v4\_prob\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& (k1\_zfmisc\_1 X0)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers)))) \Rightarrow (\forall X3. ( \\
& m2\_subset\_1 X3 (k1\_zfmisc\_1 X0) X1) \Rightarrow ((r1\_mesfunc6 X0 X1 X2 X3) \Leftrightarrow \\
& (r1\_mesfunc1 X0 X1 (k1\_mesfunc5 X0 X2) X3))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v3\_valued\_0 X0)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v2\_valued\_0 X0)) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v5\_relat\_1 X0 k1\_numbers)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v3\_valued\_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (11)$$

**Theorem 1**

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