

## t22\_measure8

(TMLr34EFhVjzLmdHHwmCr8SBt7mcWuoBH7k)

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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  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $k5\_numbers : \iota$  be given. Let  $k9\_setfam\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_numbers : \iota$  be given. Let  $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X1) \wedge ((v1\_prob\_1 X1 X0) \wedge \\ & ((v4\_prob\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0)))))) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((( \\ & v5\_relat\_1 X2 X1) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers \\ & (k9\_setfam\_1 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers (k9\_setfam\_1 X0)))))) \Leftrightarrow ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ & X2 k5\_numbers X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ & X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. k9\_setfam\_1 X0 = k1\_zfmisc\_1 X0 \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (((v1\_funct\_1 X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1)))) \wedge ((v1\_funct\_1 X5) \wedge (m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X2 X3)))) \Rightarrow (k1\_partfun1 X0 X1 X2 X3 X4 X5 = k3\_relat\_1 X4 X5) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1\_xboole\_0 \\ & X1)\wedge(((v1\_funct\_1 X3)\wedge((v1\_funct\_2 X3 X0 X1)\wedge(m1\_subset\_1 X3 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))))\wedge((v1\_funct\_1 X4)\wedge((v1\_funct\_2 \\ & X4 X1 X2)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X2))))))\Rightarrow \\ & ((v1\_funct\_1 (k3\_relat\_1 X3 X4))\wedge(v1\_funct\_2 (k3\_relat\_1 X3 X4) \\ & X0 X2)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1\_funct\_1 X4)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1))))\wedge((v1\_funct\_1 X5)\wedge(m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X2 X3))))\Rightarrow((v1\_funct\_1 (k1\_partfun1 X0 X1 X2 X3 X4 X5))\wedge(m1\_subset\_1 \\ & (k1\_partfun1 X0 X1 X2 X3 X4 X5) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X3)))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X1)\wedge((v1\_prob\_1 X1 X0)\wedge \\ & ((v4\_prob\_1 X1 X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))))\Rightarrow(\forall X2.((v5\_relat\_1 X2 X1)\wedge((v1\_funct\_1 X2)\wedge( \\ & (v1\_funct\_2 X2 k5\_numbers (k9\_setfam\_1 X0))\wedge(m1\_subset\_1 X2 ( \\ & k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (k9\_setfam\_1 X0))))))\Rightarrow \\ & (\forall X3.((v1\_funct\_1 X3)\wedge((v1\_funct\_2 X3 X1 k7\_numbers)\wedge \\ & (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 k7\_numbers))))\Rightarrow \\ & ((v1\_funct\_1 (k1\_partfun1 k5\_numbers (k9\_setfam\_1 X0) X1 k7\_numbers \\ & X2 X3))\wedge((v1\_funct\_2 (k1\_partfun1 k5\_numbers (k9\_setfam\_1 X0) \\ & X1 k7\_numbers X2 X3) k5\_numbers k7\_numbers)\wedge(m1\_subset\_1 (k1\_partfun1 \\ & k5\_numbers (k9\_setfam\_1 X0) X1 k7\_numbers X2 X3) (k1\_zfmisc\_1 ( \\ & k2\_zfmisc\_1 k5\_numbers k7\_numbers)))))) \end{aligned}$$