t45_prob_3 (TM-PCP6ENmQVvGbcByDJR7RBMSMhzqJJthsN)

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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 $m2\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_prob\_2 : \iota \Rightarrow o$ be given. Let $v2\_comseq\_2 : \iota \Rightarrow o$ be given. Let $k3\_series\_1 : \iota \Rightarrow \iota$ be given. Let $k8\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_seq\_2 : \iota \Rightarrow \iota$ be given. Let $k1\_rinfsup1 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_kurato\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k2\_prob\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v1\_prob\_1\ X1\ X0) \wedge ((v4\_prob\_1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))))) \Rightarrow (\forall X2.((v5\_relat\_1\ X2\ X1) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ k5\_numbers\ (k9\_setfam\_1\ X0)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))))) \Rightarrow (\forall X3.(m2\_prob\_1\ X3\ X0\ X1) \Rightarrow ((v1\_prob\_2\ X2) \Rightarrow (r2\_funct\_2\ k5\_numbers\ k1\_numbers\ (k8\_prob\_1\ X0\ X1\ (k2\_prob\_3\ X0\ X2)\ X3)\ (k3\_series\_1\ (k8\_prob\_1\ X0\ X1\ X2\ X3)))))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v1\_prob\_1\ X1\ X0) \wedge ((v4\_prob\_1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))))) \Rightarrow (\forall X2.((v5\_relat\_1\ X2\ X1) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ k5\_numbers\ (k9\_setfam\_1\ X0)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))))) \Rightarrow (\forall X3.(m2\_prob\_1\ X3\ X0\ X1) \Rightarrow ((v2\_comseq\_2\ (k8\_prob\_1\ X0\ X1\ (k2\_prob\_3\ X0\ X2)\ X3)) \wedge ((k2\_seq\_2\ (k8\_prob\_1\ X0\ X1\ (k2\_prob\_3\ X0\ X2)\ X3) = k1\_rinfsup1\ (k8\_prob\_1\ X0\ X1\ (k2\_prob\_3\ X0\ X2)\ X3)) \wedge (k2\_seq\_2\ (k8\_prob\_1\ X0\ X1\ (k2\_prob\_3\ X0\ X2)\ X3) = k1\_funct\_1\ X3\ (k1\_kurato\_0\ X0\ X2)))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2)\wedge ((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X0\ X1)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow((r2\_funct\_2\ X0\ X1\ X2\ X3)\Leftrightarrow(X2 = X3)) \tag{3}$$

Assume the following.

$$\forall X0.k9\_setfam\_1\ X0 = k1\_zfmisc\_1\ X0 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1\_xboole\_0\ X1)\wedge((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\wedge((v5\_relat\_1\ X2\ X1)\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0))))))))\Rightarrow((v5\_relat\_1\ (k2\_prob\_3\ X0\ X2)\ X1)\wedge((v1\_funct\_1\ (k2\_prob\_3\ X0\ X2))\wedge(v1\_funct\_2\ (k2\_prob\_3\ X0\ X2)\ k5\_numbers\ (k9\_setfam\_1\ X0)))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))))))\Rightarrow(\forall X2.(m2\_prob\_1\ X2\ X0\ X1)\Rightarrow((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X1\ k1\_numbers)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers))))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1\_xboole\_0\ X1)\wedge((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\wedge(((v5\_relat\_1\ X2\ X1)\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0))))))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X1\ k1\_numbers)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers)))))))\Rightarrow((v1\_funct\_1\ (k8\_prob\_1\ X0\ X1\ X2\ X3))\wedge((v1\_funct\_2\ (k8\_prob\_1\ X0\ X1\ X2\ X3)\ k5\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ (k8\_prob\_1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow ((v1\_funct\_1\ (k3\_series\_1\ X0))\wedge((v1\_funct\_2\ (k3\_series\_1\ X0)\ k5\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ (k3\_series\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0))))))\Rightarrow((v1\_funct\_1\ (k2\_prob\_3\ X0\ X1))\wedge((v1\_funct\_2\ (k2\_prob\_3\ X0\ X1)\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ (k2\_prob\_3\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0))))))) \tag{9}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\Rightarrow(\forall X2.((v5\_relat\_1\ X2\ X1)\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0))))))))\Rightarrow(\forall X3.(m2\_prob\_1\ X3\ X0\ X1)\Rightarrow((v1\_prob\_2\ X2)\Rightarrow((v2\_comseq\_2\ (k3\_series\_1\ (k8\_prob\_1\ X0\ X1\ X2\ X3)))\wedge((k2\_seq\_2\ (k3\_series\_1\ (k8\_prob\_1\ X0\ X1\ X2\ X3)) = k1\_rinfsup1\ (k3\_series\_1\ (k8\_prob\_1\ X0\ X1\ X2\ X3)))\wedge(k2\_seq\_2\ (k3\_series\_1\ (k8\_prob\_1\ X0\ X1\ X2\ X3)) = k1\_funct\_1\ X3\ (k1\_kurato\_0\ X0\ X2)))))))))$$