t21_prob_2 (TMUoNH5kQDhH344mXFapsc29YksYdgAACsT)

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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 $m1\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_prob\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_prob\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v1\_prob\_1\ X1\ X0) \wedge ((v4\_prob\_1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))))) \Rightarrow (\forall X2.(m1\_prob\_1\ X2\ X0\ X1) \Rightarrow (\forall X3.(m1\_prob\_1\ X3\ X0\ X1) \Rightarrow (\forall X4.(m1\_prob\_1\ X4\ X0\ X1) \Rightarrow (\forall X5.(m2\_prob\_1\ X5\ X0\ X1) \Rightarrow ((r2\_prob\_2\ X0\ X1\ X5\ X2\ X3\ X4) \Leftrightarrow ((k1\_seq\_1\ X5\ (k5\_prob\_1\ X0\ X1\ (k5\_prob\_1\ X0\ X1\ X2\ X3)\ X4) = k8\_real\_1\ (k8\_real\_1\ (k1\_seq\_1\ X5\ X2)\ (k1\_seq\_1\ X5\ X3))\ (k1\_seq\_1\ X5\ X4)) \wedge ((r1\_prob\_2\ X0\ X1\ X5\ X2\ X3) \wedge ((r1\_prob\_2\ X0\ X1\ X5\ X3\ X4) \wedge (r1\_prob\_2\ X0\ X1\ X5\ X2\ X4)))))))))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v1\_prob\_1\ X1\ X0) \wedge ((v4\_prob\_1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))))) \Rightarrow (\forall X2.(m1\_prob\_1\ X2\ X0\ X1) \Rightarrow (\forall X3.(m1\_prob\_1\ X3\ X0\ X1) \Rightarrow (\forall X4.(m2\_prob\_1\ X4\ X0\ X1) \Rightarrow ((r1\_prob\_2\ X0\ X1\ X4\ X2\ X3) \Rightarrow (r1\_prob\_2\ X0\ X1\ X4\ X3\ X2))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v1\_prob\_1\ X1\ X0) \wedge ((v4\_prob\_1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))))) \Rightarrow (\forall X2.(m1\_prob\_1\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \tag{3}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge ((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\Rightarrow(\forall X2.(m2\_prob\_1\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_prob\_1\ X3\ X0\ X1)\Rightarrow(\forall X4.(m1\_prob\_1\ X4\ X0\ X1)\Rightarrow(\forall X5.(m1\_prob\_1\ X5\ X0\ X1)\Rightarrow((r2\_prob\_2\ X0\ X1\ X2\ X3\ X4\ X5)\Leftrightarrow((k1\_seq\_1\ X2\ (k5\_prob\_1\ X0\ X1\ (k5\_prob\_1\ X0\ X1\ X3\ X4)\ X5) = k8\_real\_1\ (k8\_real\_1\ (k1\_seq\_1\ X2\ X3)\ (k1\_seq\_1\ X2\ X4))\ (k1\_seq\_1\ X2\ X5))\wedge((k1\_seq\_1\ X2\ (k5\_prob\_1\ X0\ X1\ X3\ X4) = k8\_real\_1\ (k1\_seq\_1\ X2\ X3)\ (k1\_seq\_1\ X2\ X4))\wedge((k1\_seq\_1\ X2\ (k5\_prob\_1\ X0\ X1\ X3\ X5) = k8\_real\_1\ (k1\_seq\_1\ X2\ X3)\ (k1\_seq\_1\ X2\ X5))\wedge(k1\_seq\_1\ X2\ (k5\_prob\_1\ X0\ X1\ X4\ X5) = k8\_real\_1\ (k1\_seq\_1\ X2\ X4)\ (k1\_seq\_1\ X2\ X5)))))))))))) \tag{4}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge ((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\Rightarrow(\forall X2.(m2\_prob\_1\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_prob\_1\ X3\ X0\ X1)\Rightarrow(\forall X4.(m1\_prob\_1\ X4\ X0\ X1)\Rightarrow((r1\_prob\_2\ X0\ X1\ X2\ X3\ X4)\Leftrightarrow(k1\_seq\_1\ X2\ (k5\_prob\_1\ X0\ X1\ X3\ X4) = k8\_real\_1\ (k1\_seq\_1\ X2\ X3)\ (k1\_seq\_1\ X2\ X4))))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1\_xboole\_0\ X1)\wedge((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\wedge((m1\_subset\_1\ X2\ X1)\wedge(m1\_subset\_1\ X3\ X1)))\Rightarrow (k5\_prob\_1\ X0\ X1\ X2\ X3 = k5\_prob\_1\ X0\ X1\ X3\ X2) \tag{6}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge ((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\Rightarrow(\forall X2.(m1\_prob\_1\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1\_prob\_1\ X3\ X0\ X1)\Rightarrow(\forall X4.(m1\_prob\_1\ X4\ X0\ X1)\Rightarrow(\forall X5.(m2\_prob\_1\ X5\ X0\ X1)\Rightarrow((r2\_prob\_2\ X0\ X1\ X5\ X2\ X3\ X4)\Rightarrow(r2\_prob\_2\ X0\ X1\ X5\ X3\ X2\ X4)))))))$$