t41_prob_3 (TMWKezNi-Jzau7uWE5cc6YHkPUBwr5rBUpCM)

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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 $v2\_comseq\_2 : \iota \Rightarrow o$ be given. Let $k8\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_prob\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v7\_valued\_0 : \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $v1\_seq\_2 : \iota \Rightarrow o$ be given. Let $v3\_prob\_1 : \iota \Rightarrow o$ be given. Let $m1\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_prob\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $k3\_card\_3 : \iota \Rightarrow \iota$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $v1\_comseq\_2 : \iota \Rightarrow o$ be given. Let $v2\_seq\_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v1\_prob\_1\ X1\ X0) \wedge ((v4\_prob\_1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))))) \Rightarrow (\forall X2.((v5\_relat\_1\ X2\ X1) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ k5\_numbers\ (k9\_setfam\_1\ X0)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0))))))) \Rightarrow (\forall X3.(m2\_prob\_1\ X3\ X0\ X1) \Rightarrow (v7\_valued\_0\ (k8\_prob\_1\ X0\ X1\ (k2\_prob\_3\ X0\ X2)\ X3)))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0) \wedge ((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))) \Rightarrow (((v7\_valued\_0\ X0) \wedge (v1\_seq\_2\ X0)) \Rightarrow (k2\_seq\_2\ X0 = k1\_rinfsup1\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))\Rightarrow(k1\_kurato\_0\ X0\ (k2\_prob\_3\ X0\ X1) = k1\_kurato\_0\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))\Rightarrow(v3\_prob\_1\ (k2\_prob\_3\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X1\ k1\_numbers)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers)))))\Rightarrow((m2\_prob\_1\ X2\ X0\ X1)\Leftrightarrow((\forall X3.(m1\_prob\_1\ X3\ X0\ X1)\Rightarrow(r1\_xxreal\_0\ k6\_numbers\ (k1\_seq\_1\ X2\ X3)))\wedge((k1\_seq\_1\ X2\ X0 = np\_\_1)\wedge((\forall X3.(m1\_prob\_1\ X3\ X0\ X1)\Rightarrow(\forall X4.(m1\_prob\_1\ X4\ X0\ X1)\Rightarrow((r1\_xboole\_0\ X3\ X4)\Rightarrow(k1\_seq\_1\ X2\ (k6\_prob\_1\ X0\ X1\ X3\ X4) = k7\_real\_1\ (k1\_seq\_1\ X2\ X3)\ (k1\_seq\_1\ X2\ X4)))))\wedge(\forall X3.((v5\_relat\_1\ X3\ X1)\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))))\Rightarrow((v3\_prob\_1\ X3)\Rightarrow((v2\_comseq\_2\ (k8\_prob\_1\ X0\ X1\ X3\ X2))\wedge(k2\_seq\_2\ (k8\_prob\_1\ X0\ X1\ X3\ X2) = k1\_seq\_1\ X2\ (k1\_prob\_1\ X0\ X3)))))))))) \tag{5}$$

Assume the following.

$$\forall X0.k9\_setfam\_1\ X0 = k1\_zfmisc\_1\ X0 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\Rightarrow(k1\_seq\_1\ X0\ X1 = k1\_funct\_1\ X0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))\Rightarrow(k1\_prob\_1\ X0\ X1 = k3\_card\_3\ X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))\Rightarrow(k1\_kurato\_0\ X0\ X1 = k3\_card\_3\ X1) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1\_xboole\_0\ X1)\wedge((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\wedge((v5\_relat\_1\ X2\ X1)\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))))))\Rightarrow((v5\_relat\_1\ (k2\_prob\_3\ X0\ X2)\ X1)\wedge((v1\_funct\_1\ (k2\_prob\_3\ X0\ X2))\wedge(v1\_funct\_2\ (k2\_prob\_3\ X0\ X2)\ k5\_numbers\ (k9\_setfam\_1\ X0))))) \tag{10}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\Rightarrow(\forall X2.(m2\_prob\_1\ X2\ X0\ X1)\Rightarrow((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X1\ k1\_numbers)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers))))))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1\_xboole\_0\ X1)\wedge((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))))\wedge(((v5\_relat\_1\ X2\ X1)\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0))))))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X1\ k1\_numbers)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers)))))))\Rightarrow((v1\_funct\_1\ (k8\_prob\_1\ X0\ X1\ X2\ X3))\wedge((v1\_funct\_2\ (k8\_prob\_1\ X0\ X1\ X2\ X3)\ k5\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ (k8\_prob\_1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0))))))\Rightarrow((v1\_funct\_1\ (k2\_prob\_3\ X0\ X1))\wedge((v1\_funct\_2\ (k2\_prob\_3\ X0\ X1)\ k5\_numbers\ (k9\_setfam\_1\ X0))\wedge(m1\_subset\_1\ (k2\_prob\_3\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))) \tag{14}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))\Rightarrow(((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge(v2\_comseq\_2\ X0)))\Rightarrow((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge(v1\_comseq\_2\ X0)))) \tag{15}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v3\_valued\_0\ X0)\wedge(v1\_comseq\_2\ X0))))\Rightarrow((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v3\_valued\_0\ X0)\wedge((v1\_seq\_2\ X0)\wedge(v2\_seq\_2\ X0))))) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.(v3\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v3\_valued\_0\ X2)) \tag{18}$$

Theorem 1

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