t14_integra6 (TMX-ccc957VHmW9KdF1Cy6dezUr8hQH5Wo1S)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v2\_measure5 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_integra5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_comseq\_2 : \iota \Rightarrow o$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_integra1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_funct\_1\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ k1\_numbers))) \Rightarrow (r2\_relset\_1\ X2\ k1\_numbers\ (k20\_valued\_1\ X2\ k1\_numbers\ k1\_numbers\ (k1\_integra5\ X0\ X2)\ (k1\_integra5\ X1\ X2))\ (k1\_integra5\ (k20\_valued\_1\ k1\_numbers\ k1\_numbers\ k1\_numbers\ X0\ X1)\ X2)))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge ((v2\_measure5\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers)))) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ X0\ k1\_numbers) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ k1\_numbers) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))) \Rightarrow (((v1\_comseq\_2\ (k2\_partfun1\ X0\ k1\_numbers\ X1\ X0)) \wedge ((v3\_integra1\ X1\ X0) \wedge ((v1\_comseq\_2\ (k2\_partfun1\ X0\ k1\_numbers\ X2\ X0)) \wedge (v3\_integra1\ X2\ X0)))) \Rightarrow (v3\_integra1\ (k20\_valued\_1\ X0\ k1\_numbers\ k1\_numbers\ X1\ X2)\ X0)))) \tag{2}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow(k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_funct\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k1\_numbers))))\Rightarrow(k1\_integra5\ X0\ X1 = k5\_relat\_1\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X0)\Rightarrow(k5\_relat\_1\ (k5\_relat\_1\ X0\ X1)\ X1 = k5\_relat\_1\ X0\ X1) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v2\_measure5\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow((r1\_tarski\ X0\ (k9\_xtuple\_0\ X1))\Rightarrow((v1\_funct\_1\ (k1\_integra5\ X1\ X0))\wedge((v1\_funct\_2\ (k1\_integra5\ X1\ X0)\ X0\ k1\_numbers)\wedge(m1\_subset\_1\ (k1\_integra5\ X1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1\ (k2\_zfmisc\_1\ X0\ X1) \tag{8}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow((v1\_funct\_1\ (k2\_partfun1\ X0\ X1\ X2\ X3))\wedge(m1\_subset\_1\ (k2\_partfun1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3\_membered\ X1)\wedge((v3\_membered\ X2)\wedge(((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge((v1\_funct\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X2)))))))\Rightarrow((v1\_funct\_1\ (k20\_valued\_1\ X0\ X1\ X2\ X3\ X4))\wedge(m1\_subset\_1\ (k20\_valued\_1\ X0\ X1\ X2\ X3\ X4)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_funct\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k1\_numbers))))\Rightarrow((v1\_funct\_1\ (k1\_integra5\ X0\ X1))\wedge(m1\_subset\_1\ (k1\_integra5\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ k1\_numbers)))) \tag{12}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v2\_measure5\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow((r1\_integra5\ X0\ X1)\Leftrightarrow(v3\_integra1\ (k1\_integra5\ X1\ X0)\ X0))) \tag{13}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_relat\_1\ X1)) \tag{14}$$

Theorem 1

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v2\_measure5\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))))\Rightarrow(((r1\_tarski\ X0\ (k9\_xtuple\_0\ X1))\wedge((r1\_tarski\ X0\ (k9\_xtuple\_0\ X2))\wedge((r1\_integra5\ X0\ X1)\wedge((v1\_comseq\_2\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ X1\ X0))\wedge((r1\_integra5\ X0\ X2)\wedge(v1\_comseq\_2\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ X2\ X0)))))))\Rightarrow(r1\_integra5\ X0\ (k20\_valued\_1\ k1\_numbers\ k1\_numbers\ k1\_numbers\ X1\ X2)))))$$