t89_integra8 (TMMt4eRqsvbfShentfSXZuhFConHH1WFRaH)

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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 $k2\_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24\_sin\_cos : \iota$ be given. Let $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_seq\_4 : \iota \Rightarrow \iota$ be given. Let $k5\_seq\_4 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_rcomp\_1 : \iota \Rightarrow o$ be given. Let $r2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_integra5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $v1\_int\_1 : \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $k2\_subset\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_funct\_1\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v2\_measure5\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ k1\_numbers)))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k1\_numbers) \Rightarrow (\forall X3.((v3\_rcomp\_1\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ k1\_numbers))) \Rightarrow (((r2\_fdiff\_1\ X0\ X3) \wedge ((r1\_tarski\ X1\ X3) \wedge ((r1\_integra5\ X1\ (k2\_fdiff\_1\ X0\ X3)) \wedge (v1\_comseq\_2\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ (k2\_fdiff\_1\ X0\ X3)\ X1))))) \Rightarrow (k2\_integra5\ X1\ (k26\_valued\_1\ k1\_numbers\ k1\_numbers\ (k2\_fdiff\_1\ X0\ X3)\ X2) = k9\_real\_1\ (k8\_real\_1\ X2\ (k1\_seq\_1\ X0\ (k4\_seq\_4\ X1)))\ (k8\_real\_1\ X2\ (k1\_seq\_1\ X0\ (k5\_seq\_4\ X1)))))))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow ((r2\_fdiff\_1\ k24\_sin\_cos\ k1\_numbers) \wedge (k1\_fdiff\_1\ k24\_sin\_cos\ X0 = k1\_seq\_1\ k24\_sin\_cos\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1))\Leftrightarrow(r1\_tarski\ X0\ X1) \tag{3}$$

Assume the following.

$$k2\_fdiff\_1\ k24\_sin\_cos\ k1\_numbers = k24\_sin\_cos \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge(m1\_subset\_1\ X3\ X0)))\Rightarrow(k3\_funct\_2\ X0\ X1\ X2\ X3 = k1\_funct\_1\ X2\ X3) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\Rightarrow(k1\_seq\_1\ X0\ X1 = k1\_funct\_1\ X0\ X1) \tag{6}$$

Assume the following.

$$\exists X0.(m1\_subset\_1\ X0\ k1\_numbers)\wedge((v1\_xxreal\_0\ X0)\wedge((v1\_xcmplx\_0\ X0)\wedge((v1\_xreal\_0\ X0)\wedge(v1\_int\_1\ X0)))) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v2\_measure5\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))))\Rightarrow((r1\_integra5\ X0\ k24\_sin\_cos)\wedge(v1\_comseq\_2\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k24\_sin\_cos\ X0))) \tag{8}$$

Assume the following.

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

Assume the following.

$$v3\_rcomp\_1\ (k2\_subset\_1\ k1\_numbers) \tag{10}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{11}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))\Rightarrow(m1\_subset\_1\ (k5\_seq\_4\ X0)\ k1\_numbers) \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))\Rightarrow(m1\_subset\_1\ (k4\_seq\_4\ X0)\ k1\_numbers) \tag{13}$$

Assume the following.

$$\forall X0.m1\_subset\_1\ (k2\_subset\_1\ X0)\ (k1\_zfmisc\_1\ X0) \tag{14}$$

Assume the following.

$$(v1\_funct\_1\ k24\_sin\_cos)\wedge((v1\_funct\_2\ k24\_sin\_cos\ k1\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ k24\_sin\_cos\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \tag{15}$$

Assume the following.

$$\forall X0.k2\_subset\_1\ X0 = X0 \tag{16}$$

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

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v2\_measure5\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(k2\_integra5\ X0\ (k26\_valued\_1\ k1\_numbers\ k1\_numbers\ k24\_sin\_cos\ X1) = k9\_real\_1\ (k8\_real\_1\ X1\ (k3\_funct\_2\ k1\_numbers\ k1\_numbers\ k24\_sin\_cos\ (k4\_seq\_4\ X0)))\ (k8\_real\_1\ X1\ (k3\_funct\_2\ k1\_numbers\ k1\_numbers\ k24\_sin\_cos\ (k5\_seq\_4\ X0)))))$$