t32_int_4 (TMTrzhVwA5gcbVriF18uAudXZ5yKeXZD7eT)

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Let $m1\_trees\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_nat\_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_recdef\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_wsierp\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_rvsum\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_valued\_0 : \iota \Rightarrow o$ be given. Let $v6\_membered : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m1\_trees\_4\ X1\ k1\_numbers\ k5\_numbers) \Rightarrow ((X0 \in k1\_rvsum\_1\ X1) \Rightarrow (r1\_nat\_d\ X0\ (k3\_wsierp\_1\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((X0 \in k9\_xtuple\_0\ X1) \Rightarrow (k1\_funct\_1\ X1\ X0 \in k10\_xtuple\_0\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))) \Rightarrow (\forall X2.(m1\_trees\_4\ X2\ X0\ X1) \Leftrightarrow (m1\_finseq\_1\ X2\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v3\_valued\_0\ X0)) \Rightarrow (k1\_rvsum\_1\ X0 = k10\_xtuple\_0\ X0) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow(k1\_relset\_1\ X0\ X1 = k9\_xtuple\_0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v4\_valued\_0\ X0)))\Rightarrow(k1\_recdef\_1\ X0\ X1 = k1\_funct\_1\ X0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v4\_valued\_0\ X0))\Rightarrow(v6\_membered\ (k10\_xtuple\_0\ X0)) \tag{9}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X2.(m1\_trees\_4\ X2\ X0\ X1)\Rightarrow(m2\_finseq\_1\ X2\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{12}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))) \tag{14}$$

Assume the following.

$$\forall X0.(m1\_finseq\_1\ X0\ k1\_numbers)\Rightarrow(v3\_valued\_0\ X0) \tag{15}$$

Assume the following.

$$\forall X0.(m1\_finseq\_1\ X0\ k5\_numbers)\Rightarrow(v4\_valued\_0\ X0) \tag{16}$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v7\_ordinal1\ X1)) \tag{17}$$

Theorem 1

$$\forall X0.(m1\_trees\_4\ X0\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow((X1 \in k1\_relset\_1\ k5\_numbers\ X0)\Rightarrow(r1\_nat\_d\ (k1\_recdef\_1\ X0\ X1)\ (k3\_wsierp\_1\ X0))))$$