l10_nat_lat (TMRWCCNc-sJQ5tp9cX6hq99T3XKyDpo6be5A)

October 27, 2020

Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_nat\_lat : \iota$ be given. Let $k2\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_nat\_lat : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k6\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v6\_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (k6\_nat\_d\ X0\ np\_\_1 = np\_\_1) \tag{1}$$

Assume the following.

$$\begin{gathered}((v2\_xxreal\_0\ np\_\_1) \wedge (m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers)) \wedge \\ ((m1\_subset\_1\ np\_\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_1\ k1\_numbers))\end{gathered} \tag{2}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\begin{gathered}\forall X0.\forall X1.((m1\_subset\_1\ X0\ (u1\_struct\_0\ k3\_nat\_lat)) \wedge \\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ k3\_nat\_lat))) \Rightarrow (k2\_lattices\ k3\_nat\_lat \\ X0\ X1 = k6\_nat\_d\ X0\ X1)\end{gathered} \tag{4}$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \tag{5}$$

Assume the following.

$$v6\_membered\ (u1\_struct\_0\ k3\_nat\_lat) \tag{6}$$

Assume the following.

$$m1\_subset\_1\ k4\_nat\_lat\ (u1\_struct\_0\ k3\_nat\_lat) \tag{7}$$

Assume the following.

$$k4\_nat\_lat = np\_\_1 \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(k6\_nat\_d\ X0\ X1 = k6\_nat\_d\ X1\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v7\_ordinal1\ X1)) \tag{10}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ k3\_nat\_lat))\Rightarrow((k2\_lattices\ k3\_nat\_lat\ k4\_nat\_lat\ X0 = k4\_nat\_lat)\wedge(k2\_lattices\ k3\_nat\_lat\ X0\ k4\_nat\_lat = k4\_nat\_lat))$$