t29_nat_3 (TMKYVUf4TihrFSG48bSr8kQAnXES5YQurBS)

October 27, 2020

Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_int\_2 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_nat\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k23\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_nat\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2. (v1\_xcmplx\_0\ X2) \Rightarrow (k1\_newton\ X2\ (k2\_xcmplx\_0\ X0\ X1) = k3\_xcmplx\_0\ (k1\_newton\ X2\ X0)\ (k1\_newton\ X2\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.((v7\_ordinal1\ X0) \wedge (v1\_int\_2\ X0)) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (v7\_ordinal1\ X1)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge (v7\_ordinal1\ X2)) \Rightarrow (k11\_nat\_3\ (k24\_binop\_2\ X1\ X2)\ X0 = k23\_binop\_2\ (k11\_nat\_3\ X1\ X0)\ (k11\_nat\_3\ X2\ X0)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow (k24\_binop\_2\ X0\ X1 = k3\_xcmplx\_0\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow (k23\_binop\_2\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow (k11\_nat\_3\ X0\ X1 = k10\_nat\_3\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow (v7\_ordinal1\ (k1\_newton\ X0\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(v7\_ordinal1\ (k10\_nat\_3\ X0\ X1)) \tag{7}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{8}$$

Theorem 1

$$\forall X0.((v7\_ordinal1\ X0)\wedge(v1\_int\_2\ X0))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge(v7\_ordinal1\ X1))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge(v7\_ordinal1\ X2))\Rightarrow(k1\_newton\ X0\ (k11\_nat\_3\ (k24\_binop\_2\ X1\ X2)\ X0) = k24\_binop\_2\ (k1\_newton\ X0\ (k11\_nat\_3\ X1\ X0))\ (k1\_newton\ X0\ (k11\_nat\_3\ X2\ X0)))))$$