t16_nat_5 (TMWjD8CGmdMv4Y2WEvDagcJmhwFa3uVm38p)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k3\_moebius1 : \iota \Rightarrow \iota$ be given. Let $k24\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_nat\_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\forall X2.\ (v1\_xreal\_0\ X2) \Rightarrow (\neg(\neg r1\_xxreal\_0\ X0\ k6\_numbers) \wedge ((\neg r1\_xxreal\_0\ X2\ X1) \wedge (r1\_xxreal\_0\ (k3\_xcmplx\_0\ X2\ X0)\ (k3\_xcmplx\_0\ X1\ X0))))))) \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\neg(k6\_numbers = X0) \wedge (r1\_xxreal\_0\ X0\ k6\_numbers)) \tag{2}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow ((X1 \in k3\_moebius1\ X0) \Leftrightarrow ((\neg r1\_xxreal\_0\ X1\ k6\_numbers) \wedge (r1\_nat\_d\ X1\ X0)))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k3\_xcmplx\_0\ X0\ k6\_numbers = k6\_numbers) \tag{4}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2.\ (v7\_ordinal1\ X2) \Rightarrow (\forall X3.(v7\_ordinal1\ X3) \Rightarrow (((r1\_nat\_d\ X0\ X2) \wedge (r1\_nat\_d\ X1\ X3)) \Rightarrow (r1\_nat\_d\ (k24\_binop\_2\ X0\ X1)\ (k24\_binop\_2\ X2\ X3))))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow (k24\_binop\_2\ X0\ X1 = k3\_xcmplx\_0\ X0\ X1) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(v7\_ordinal1\ (k3\_xcmplx\_0\ X0\ X1)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(k24\_binop\_2\ X0\ X1 = k24\_binop\_2\ X1\ X0) \tag{8}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xreal\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{10}$$

Theorem 1

$$\forall X0.((v7\_ordinal1\ X0)\wedge(\neg v1\_xboole\_0\ X0))\Rightarrow(\forall X1.((v7\_ordinal1\ X1)\wedge(\neg v1\_xboole\_0\ X1))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(v7\_ordinal1\ X3)\Rightarrow(((X2\in k3\_moebius1\ X0)\wedge(X3\in k3\_moebius1\ X1))\Rightarrow(k24\_binop\_2\ X2\ X3\in k3\_moebius1\ (k24\_binop\_2\ X0\ X1))))))$$