l64_sin_cos6 (TMY8f58PbG77mBNtfsvf8BA652QuQXq4nFu)

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Let $v1\_int\_1 : \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k8\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k32\_sin\_cos : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5\_numbers : \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k31\_sin\_cos : \iota$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{2}$$

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.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{4}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_2) \wedge (m2\_subset\_1\ np\_\_2\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_2\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_2\ k1\_numbers)) \tag{5}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1) \wedge (m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(k8\_subset\_1\ X0\ X1\ X2 = k3\_xboole\_0\ X1\ X2) \tag{8}$$

Assume the following.

$$k32\_sin\_cos = k31\_sin\_cos \tag{9}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\forall X2.(v1\_xreal\_0\ X2)\Rightarrow(\forall X3.(v1\_xreal\_0\ X3)\Rightarrow((X1 \in k1\_rcomp\_1\ (k3\_real\_1\ X2\ (k8\_real\_1\ (k8\_real\_1\ np\_\_2\ k32\_sin\_cos)\ X0))\ (k3\_real\_1\ X3\ (k8\_real\_1\ (k8\_real\_1\ np\_\_2\ k32\_sin\_cos)\ X0)))\Rightarrow(k3\_real\_1\ X1\ (k8\_real\_1\ np\_\_2\ k32\_sin\_cos) \in k1\_rcomp\_1\ (k3\_real\_1\ X2\ (k8\_real\_1\ (k8\_real\_1\ np\_\_2\ k32\_sin\_cos)\ (k3\_real\_1\ X0\ np\_\_1)))\ (k3\_real\_1\ X3\ (k8\_real\_1\ (k8\_real\_1\ np\_\_2\ k32\_sin\_cos)\ (k3\_real\_1\ X0\ np\_\_1))))))))) \tag{10}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(m1\_subset\_1\ (k8\_real\_1\ X0\ X1)\ k1\_numbers) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(m1\_subset\_1\ X1\ k1\_numbers))\Rightarrow(m1\_subset\_1\ (k3\_real\_1\ X0\ X1)\ k1\_numbers) \tag{13}$$

Assume the following.

$$v1\_xreal\_0\ k31\_sin\_cos \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3\_xboole\_0\ X0\ X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(k8\_subset\_1\ X0\ X1\ X2 = k8\_subset\_1\ X0\ X2\ X1) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(m1\_subset\_1\ X1\ k1\_numbers))\Rightarrow (k3\_real\_1\ X0\ X1 = k3\_real\_1\ X1\ X0) \tag{17}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(v1\_xreal\_0\ X0) \tag{18}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v1\_xreal\_0\ X1)) \tag{19}$$

Theorem 1

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\forall X2.\ (v1\_xreal\_0\ X2)\Rightarrow(\forall X3.(v1\_xreal\_0\ X3)\Rightarrow((X1 \in k8\_subset\_1\ k1\_numbers\ (k1\_rcomp\_1\ (k3\_real\_1\ X2\ (k8\_real\_1\ (k8\_real\_1\ np\_\_2\ k32\_sin\_cos)\ X0))\ (k3\_real\_1\ X3\ (k8\_real\_1\ (k8\_real\_1\ np\_\_2\ k32\_sin\_cos)\ X0)))\ k1\_numbers)\Rightarrow(k3\_real\_1\ X1\ (k8\_real\_1\ np\_\_2\ k32\_sin\_cos) \in k8\_subset\_1\ k1\_numbers\ (k1\_rcomp\_1\ (k3\_real\_1\ X2\ (k8\_real\_1\ (\ k8\_real\_1\ np\_\_2\ k32\_sin\_cos)\ (k3\_real\_1\ X0\ np\_\_1)))\ (k3\_real\_1\ X3\ (k8\_real\_1\ (k8\_real\_1\ np\_\_2\ k32\_sin\_cos)\ (k3\_real\_1\ X0\ np\_\_1))))\ k1\_numbers)))))$$