l81_jgraph_5 (TMMJu37QSLHi8BczSCjo2fcCCyADEotUq8H)

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Let $k12\_euclid : \iota \Rightarrow \iota$ be given. Let $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_real\_1 : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k15\_euclid : \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k7\_square\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_square\_1 : \iota \Rightarrow \iota$ be given. Let $k17\_euclid : \iota \Rightarrow \iota$ be given. Let $k18\_euclid : \iota \Rightarrow \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_xcmplx\_0 : \iota \Rightarrow \iota$ 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 $np\_\_0 : \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k3\_square\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\begin{gathered}\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \Rightarrow \\ ((k12\_euclid\ X0 = k7\_square\_1\ (k7\_real\_1\ (k5\_square\_1\ (k17\_euclid \\ X0))\ (k5\_square\_1\ (k18\_euclid\ X0)))) \wedge (k5\_square\_1\ (k12\_euclid \\ X0) = k7\_real\_1\ (k5\_square\_1\ (k17\_euclid\ X0))\ (k5\_square\_1\ (k18\_euclid \\ X0))))\end{gathered} \tag{2}$$

Assume the following.

$$k7\_square\_1\ np\_\_1 = np\_\_1 \tag{3}$$

Assume the following.

$$\begin{gathered}\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k3\_xcmplx\_0\ X0\ (k4\_xcmplx\_0\ np\_\_1) = \\ k4\_xcmplx\_0\ X0)\end{gathered} \tag{4}$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$v1\_xboole\_0\ np\_\_0 \tag{7}$$

Assume the following.

$$k4\_xcmplx\_0\ (k4\_xcmplx\_0\ np\_\_1) = np\_\_1 \tag{8}$$

Assume the following.

$$k3\_xcmplx\_0\ np\_\_0\ np\_\_0 = np\_\_0 \tag{9}$$

Assume the following.

$$k2\_xcmplx\_0\ np\_\_1\ np\_\_0 = np\_\_1 \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k7\_real\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{11}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(k5\_square\_1\ X0 = k3\_square\_1\ X0) \tag{13}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(k1\_real\_1\ X0 = k4\_xcmplx\_0\ X0) \tag{14}$$

Assume the following.

$$\exists X0.(v1\_xboole\_0\ X0)\wedge((v1\_xcmplx\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))) \tag{15}$$

Assume the following.

$$k18\_euclid\ (k19\_euclid\ k6\_numbers\ np\_\_1) = np\_\_1 \tag{16}$$

Assume the following.

$$k17\_euclid\ (k19\_euclid\ k6\_numbers\ np\_\_1) = k6\_numbers \tag{17}$$

Assume the following.

$$k18\_euclid\ (k19\_euclid\ k6\_numbers\ (k1\_real\_1\ np\_\_1)) = k1\_real\_1\ np\_\_1 \tag{18}$$

Assume the following.

$$k17\_euclid\ (k19\_euclid\ k6\_numbers\ (k1\_real\_1\ np\_\_1)) = k6\_numbers \tag{19}$$

Assume the following.

$$(k17\_euclid\ (k19\_euclid\ np\_\_1\ k6\_numbers) = np\_\_1) \wedge (k18\_euclid\ (k19\_euclid\ np\_\_1\ k6\_numbers) = k6\_numbers) \tag{20}$$

Assume the following.

$$k18\_euclid\ (k19\_euclid\ (k1\_real\_1\ np\_\_1)\ k6\_numbers) = k6\_numbers \tag{21}$$

Assume the following.

$$k17\_euclid\ (k19\_euclid\ (k1\_real\_1\ np\_\_1)\ k6\_numbers) = k1\_real\_1\ np\_\_1 \tag{22}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow ((v1\_xcmplx\_0\ (k4\_xcmplx\_0\ X0)) \wedge (v1\_xreal\_0\ (k4\_xcmplx\_0\ X0))) \tag{23}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (m1\_subset\_1\ (k19\_euclid\ X0\ X1)\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \tag{24}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \Rightarrow (m1\_subset\_1\ (k17\_euclid\ X0)\ k1\_numbers) \tag{25}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k3\_square\_1\ X0 = k3\_xcmplx\_0\ X0\ X0) \tag{26}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (k7\_real\_1\ X0\ X1 = k7\_real\_1\ X1\ X0) \tag{27}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers) \Rightarrow (v1\_xreal\_0\ X0) \tag{28}$$

Theorem 1

$$(k12\_euclid\ (k19\_euclid\ (k1\_real\_1\ np\_\_1)\ k6\_numbers) = np\_\_1) \wedge ((k12\_euclid\ (k19\_euclid\ np\_\_1\ k6\_numbers) = np\_\_1) \wedge ((k12\_euclid\ (k19\_euclid\ k6\_numbers\ (k1\_real\_1\ np\_\_1)) = np\_\_1) \wedge (k12\_euclid\ (k19\_euclid\ k6\_numbers\ np\_\_1) = np\_\_1)))$$