

## t2\_holder\_1

(TMSy1HvfnG9TBzv6R1qXfJobjqQ51pAeNsU)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k4\_power : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k3\_power : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k9\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $k4\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow ((v1\_xboole\_0 X0) \vee ((v2\_xxreal\_0 X1) \vee (v3\_xxreal\_0 X0)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\neg(r1\_xxreal\_0 X0 X1) \wedge ((\neg v3\_xxreal\_0 X0) \wedge (v3\_xxreal\_0 X1)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2.(v1\_xxreal\_0 X2) \Rightarrow ((\neg r1\_xxreal\_0 X0 k6\_numbers) \Rightarrow (k3\_power (k3\_power X0 X1) X2 = k3\_power X0 (k3\_xcmplx\_0 X1 X2)))))) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 X0 k6\_numbers = k6\_numbers) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 k6\_numbers) \wedge ((\neg r1\_xxreal\_0 X1 k6\_numbers) \wedge (r1\_xxreal\_0 (k3\_xcmplx\_0 X0 X1) k6\_numbers)))))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k8\_real\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (7)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(m1\_subset\_1 X1 k1\_numbers))\Rightarrow(k4\_power X0 X1 = k3\_power X0 X1) \quad (9)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0 X0)\wedge((v1\_xcmplx\_0 X0)\wedge((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X0))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_xxreal\_0 X0)\wedge(v1\_xreal\_0 X0))\wedge((\neg v2\_xxreal\_0 X1)\wedge(v1\_xreal\_0 X1)))\Rightarrow(\neg v3\_xxreal\_0 (k3\_xcmplx\_0 X0 X1)) \quad (11)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(m1\_subset\_1 (k8\_real\_1 X0 X1) k1\_numbers) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(m1\_subset\_1 X1 k1\_numbers))\Rightarrow(m1\_subset\_1 (k4\_power X0 X1) k1\_numbers) \quad (14)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(\forall X1.(v1\_xreal\_0 X1)\Rightarrow(\forall X2.(v1\_xreal\_0 X2)\Rightarrow(((\neg r1\_xxreal\_0 X0 k6\_numbers)\Rightarrow((X2 = k3\_power X0 X1)\Leftrightarrow(X2 = k9\_prepower X0 X1)))\wedge(((X0 = k6\_numbers)\Rightarrow((r1\_xxreal\_0 X1 k6\_numbers)\vee((X2 = k3\_power X0 X1)\Leftrightarrow(X2 = k6\_numbers))))\wedge((v1\_int\_1 X1)\Rightarrow((X2 = k3\_power X0 X1)\Leftrightarrow(\exists X3.(v1\_int\_1 X3)\wedge((X3 = X1)\wedge(X2 = k4\_prepower X0 X3)))))))))) \quad (15)$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0 X0)\wedge(v2\_xxreal\_0 X0))\Rightarrow((\neg v1\_xboole\_0 X0)\wedge((v1\_xxreal\_0 X0)\wedge(\neg v3\_xxreal\_0 X0))) \quad (16)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (17)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 k6\_numbers) \wedge ((\neg r1\_xxreal\_0 \\ & X1 k6\_numbers) \wedge (\exists X2.(m1\_subset\_1 X2 k1\_numbers) \wedge ((r1\_xxreal\_0 \\ & k6\_numbers X2) \wedge (k4\_power (k4\_power X2 X0) X1 \neq k4\_power X2 (k8\_real\_1 \\ & X0 X1)))))))) \end{aligned}$$