

t25_int_2

(TMT5LgNs3FSDjz17mByfveoBRLxVCUyWBU8)

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Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $r1_int_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_int_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_int_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_int_2 : \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (\forall X2. \\ & (v1_int_1 X2) \Rightarrow ((r1_int_1 X0 X1) \Rightarrow (r1_int_1 X0 (k3_xcmplx_0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (\forall X2. \\ & (v1_int_1 X2) \Rightarrow ((r1_int_2 X0 X1) \Rightarrow ((k3_int_2 (k3_xcmplx_0 X2 X0) \\ & (k3_xcmplx_0 X2 X1) = k1_int_2 X2) \wedge ((k3_int_2 (k3_xcmplx_0 X2 X0) \\ & (k3_xcmplx_0 X1 X2) = k1_int_2 X2) \wedge ((k3_int_2 (k3_xcmplx_0 X0 X2) \\ & (k3_xcmplx_0 X2 X1) = k1_int_2 X2) \wedge (k3_int_2 (k3_xcmplx_0 X0 X2) \\ & (k3_xcmplx_0 X1 X2) = k1_int_2 X2))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (((r1_int_1 \\ & X0 X1) \Rightarrow (r1_int_1 X0 (k4_xcmplx_0 X1))) \wedge (((r1_int_1 X0 (k4_xcmplx_0 \\ & X1)) \Rightarrow (r1_int_1 X0 X1)) \wedge (((r1_int_1 X0 X1) \Rightarrow (r1_int_1 (k4_xcmplx_0 \\ & X0 X1)) \wedge (((r1_int_1 (k4_xcmplx_0 X0) X1) \Rightarrow (r1_int_1 X0 X1)) \wedge \\ & ((r1_int_1 X0 X1) \Rightarrow (r1_int_1 (k4_xcmplx_0 X0) (k4_xcmplx_0 X1))) \wedge \\ & (((r1_int_1 (k4_xcmplx_0 X0) (k4_xcmplx_0 X1)) \Rightarrow (r1_int_1 X0 X1)) \wedge \\ & (((r1_int_1 X0 (k4_xcmplx_0 X1)) \Rightarrow (r1_int_1 (k4_xcmplx_0 X0) X1)) \wedge \\ & ((r1_int_1 (k4_xcmplx_0 X0) X1) \Rightarrow (r1_int_1 X0 (k4_xcmplx_0 X1)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0) \wedge (v1_int_1 X1)) \Rightarrow ((r1_int_2 X0 X1) \Rightarrow (r1_int_2 X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0)\wedge(v1_int_1 X1))\Rightarrow(r1_int_1 X0 X0) \quad (5)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

$$\forall X0.(v1_int_1 X0)\Rightarrow(k1_int_2 X0 = k16_complex1 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0)\wedge(v1_int_1 X1))\Rightarrow(v1_int_1 (k3_xcmplx_0 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0)\wedge(v1_int_1 X1))\Rightarrow(v7_ordinal1 (k3_int_2 X0 X1)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_int_1 X0)\Rightarrow(\forall X1.(v1_int_1 X1)\Rightarrow(\forall X2. \\ & (v7_ordinal1 X2)\Rightarrow((X2 = k3_int_2 X0 X1)\Leftrightarrow((r1_int_1 X2 X0)\wedge((r1_int_1 \\ & X2 X1)\wedge(\forall X3.(v1_int_1 X3)\Rightarrow(((r1_int_1 X3 X0)\wedge(r1_int_1 \\ & X3 X1))\Rightarrow(r1_int_1 X3 X2)))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(((r1_xxreal_0 k6_numbers X0)\Rightarrow(k16_complex1 X0 = X0))\wedge((\neg r1_xxreal_0 k6_numbers X0)\Rightarrow(k16_complex1 X0 = k4_xcmplx_0 X0))) \quad (11)$$

Assume the following.

$$\forall X0.(v1_int_1 X0)\Rightarrow(v1_xreal_0 X0) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_int_1 X0)\Rightarrow(\forall X1.(v1_int_1 X1)\Rightarrow(\forall X2. \\ & (v1_int_1 X2)\Rightarrow(((r1_int_1 X0 (k3_xcmplx_0 X1 X2))\wedge(r1_int_2 X1 \\ & X0))\Rightarrow(r1_int_1 X0 X2)))) \end{aligned}$$