

t23_nat_d

(TMU6GwRjURnT7NgHvDWYzmj9LjUWJvW4o7q)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow (k4_nat_d (k2_xcmplx_0 X0 X1) X2 = k4_nat_d (k2_nat_1 \\ & (k4_nat_d X0 X2) X1) X2))) \end{aligned} \tag{1}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((m1_subset_1 X0 k5_numbers) \wedge (v7_ordinal1 \\ & X1)) \Rightarrow (k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1 X0) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow \\ & (k1_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (\\ & m1_subset_1 (k4_nat_d X0 X1) k5_numbers) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ & k2_xcmplx_0 X0 X1 = k2_xcmplx_0 X1 X0) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{7}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xreal_0 X0) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow (k4_nat_d (k2_xcmplx_0 X0 X1) X2 = k4_nat_d (k1_nat_1 \\ & X0 (k4_nat_d X1 X2)) X2))) \end{aligned}$$