

t81_matrixr2 (TMTJJEenCpYZpNvSdgNC- QhjXY8T1Undi9Ti)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_matrixr2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_matrixr2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_matrixr2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_real_1 : \iota \Rightarrow \iota$ be given. Let $k4_matrixr2 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_matrixr2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k5_xcmplx_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (k3_matrixr2 X0 (k4_matrixr2 X0) = np_1) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_matrix_1 X1 k1_numbers X0 X0) \Rightarrow (\forall X2.(m1_matrix_1 X2 k1_numbers X0 X0) \Rightarrow (k3_matrixr2 X0 (k1_matrixr2 X0 X1 X2) = k8_real_1 (k3_matrixr2 X0 X1) (k3_matrixr2 X0 X2)))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (k8_real_1 X0 X1 = k3_xcmplx_0 X0 X1) \quad (5)$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k2_real_1 X0 = k5_xcmplx_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k2_real_1 (k2_real_1 X0) = X0) \quad (8)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_subset_1 X0 k5_numbers) \wedge (m1_matrix_1 \\ X1 k1_numbers X0 X0)) \Rightarrow (m1_matrix_1 (k7_matrixr2 X0 X1) k1_numbers \\ X0 X0) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_subset_1 X0 k5_numbers) \wedge (m1_matrix_1 \\ X1 k1_numbers X0 X0)) \Rightarrow (m1_subset_1 (k3_matrixr2 X0 X1) k1_numbers) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow ((\\ (X0 \neq k6_numbers) \Rightarrow ((X1 = k5_xcmplx_0 X0) \Leftrightarrow (k3_xcmplx_0 X0 X1 = np_1))) \wedge \\ ((X0 = k6_numbers) \Rightarrow ((X1 = k5_xcmplx_0 X0) \Leftrightarrow (X1 = k6_numbers)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_matrix_1 \\ X1 k1_numbers X0 X0) \Rightarrow ((v1_matrixr2 X1 X0) \Rightarrow (\forall X2.(m1_matrix_1 \\ X2 k1_numbers X0 X0) \Rightarrow ((X2 = k7_matrixr2 X0 X1) \Leftrightarrow ((k1_matrixr2 X0 \\ X2 X1 = k4_matrixr2 X0) \wedge (k1_matrixr2 X0 X1 X2 = k4_matrixr2 X0)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_matrix_1 \\ X1 k1_numbers X0 X0) \Rightarrow ((v1_matrixr2 X1 X0) \Rightarrow (k3_matrixr2 X0 (k7_matrixr2 \\ X0 X1) = k2_real_1 (k3_matrixr2 X0 X1)))) \end{aligned}$$