

t47_matrixr2 (TMX-
tKGV8GncQWXB4P2NWjwJzGVF3SZwTKNG)

October 27, 2020

Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k12_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_rsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k4_rsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_matrix_1 \\ X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow ((k3_finseq_1 \\ X1 = k3_finseq_1 X0) \Rightarrow (k3_finseq_1 (k12_matrixr1 X1 X0) = k1_matrix_1 \\ X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ X1 k1_numbers) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 \\ (k3_finseq_2 k1_numbers))) \Rightarrow (((k3_finseq_1 X0 = k3_finseq_1 X1) \wedge \\ (k3_finseq_1 X2 = k3_finseq_1 X0)) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 \\ X0) k6_numbers) \vee (k12_matrixr1 X2 (k4_rsum_1 X0 X1) = k4_rsum_1 \\ (k12_matrixr1 X2 X0) (k12_matrixr1 X2 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ X1 k1_numbers) \Rightarrow ((k3_finseq_1 X0 = k3_finseq_1 X1) \Rightarrow (X0 = k4_rsum_1 \\ (k8_rsum_1 X0 X1) X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ X1 k1_numbers) \Rightarrow ((k3_finseq_1 X0 = k3_finseq_1 X1) \Rightarrow (X0 = k8_rsum_1 \\ (k4_rsum_1 X0 X1) X1))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v3_valued_0 \\ X0) \wedge (v1_finseq_1 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 \\ X1) \wedge ((v3_valued_0 X1) \wedge (v1_finseq_1 X1)))) \Rightarrow ((k3_finseq_1 X0 = \\ k3_finseq_1 X1) \Rightarrow (k3_finseq_1 (k8_rvsum_1 X0 X1) = k3_finseq_1 \\ X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (\\ (v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (\\ v3_valued_0 X0) \wedge (v1_finseq_1 X0)))) \wedge ((v1_relat_1 X1) \wedge ((v1_funct_1 \\ X1) \wedge ((v3_valued_0 X1) \wedge (v1_finseq_1 X1)))) \Rightarrow (m2_finseq_1 (k8_rvsum_1 \\ X0 X1) k1_numbers) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v1_matrix_1 X0) \wedge (m1_finseq_1 X0 (k3_finseq_2 \\ k1_numbers))) \wedge (m1_finseq_1 X1 k1_numbers)) \Rightarrow (m2_finseq_1 (k12_matrixr1 \\ X0 X1) k1_numbers) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (m1_finseq_1 X0 k1_numbers) \Rightarrow (v3_valued_0 X0) \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0. (m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1. (m2_finseq_1 \\ X1 k1_numbers) \Rightarrow (\forall X2. ((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 \\ (k3_finseq_2 k1_numbers))) \Rightarrow (((k3_finseq_1 X0 = k3_finseq_1 X2) \wedge \\ (k3_finseq_1 X1 = k3_finseq_1 X0)) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 \\ X0) k6_numbers) \vee (k12_matrixr1 X2 (k8_rvsum_1 X0 X1) = k8_rvsum_1 \\ (k12_matrixr1 X2 X0) (k12_matrixr1 X2 X1)))))) \end{aligned}$$