

t49_matrprob

(TMQwUdCf4LYQxDPfL8qN1c8oEM7enKeVpAs)

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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 $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_matrix_1 \\ X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow (\neg(\neg r1_xxreal_0 \\ (k3_finseq_1 X1) k6_numbers) \wedge ((\neg r1_xxreal_0 (k1_matrix_1 X1) \\ k6_numbers) \wedge (((k1_matrix_1 X1 = k3_finseq_1 X0) \vee (k3_finseq_1 \\ (k4_matrix_1 k1_numbers X1) = k3_finseq_1 X0)) \wedge (k11_matrixr1 \\ X1 X0 \neq k12_matrixr1 (k4_matrix_1 k1_numbers X1) X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_matrix_1 \\ X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow (\neg(\neg r1_xxreal_0 \\ (k3_finseq_1 X1) k6_numbers) \wedge ((\neg r1_xxreal_0 (k1_matrix_1 X1) \\ k6_numbers) \wedge (((k3_finseq_1 X1 = k3_finseq_1 X0) \vee (k1_matrix_1 \\ (k4_matrix_1 k1_numbers X1) = k3_finseq_1 X0)) \wedge (k11_matrixr1 \\ (k4_matrix_1 k1_numbers X1) X0 \neq k12_matrixr1 X1 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ X1 k1_numbers) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 \\ (k3_finseq_2 k1_numbers))) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 X2) \wedge \\ (k3_finseq_1 X0 = k1_matrix_1 X2)) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 \\ X0) k6_numbers) \vee ((r1_xxreal_0 (k3_finseq_1 X1) k6_numbers) \vee \\ (k23_rvsum_1 (k11_matrixr1 X2 X0) X1 = k23_rvsum_1 X0 (k11_matrixr1 \\ (k4_matrix_1 k1_numbers X2) X1))))))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 \\ & (k3_finseq_2 k1_numbers))) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 X2) \wedge \\ & (k3_finseq_1 X0 = k1_matrix_1 X2)) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 \\ & X0) k6_numbers) \vee ((r1_xxreal_0 (k3_finseq_1 X1) k6_numbers) \vee \\ & (k23_rvsum_1 X0 (k12_matrixr1 X2 X1) = k23_rvsum_1 (k12_matrixr1 \\ & (k4_matrix_1 k1_numbers X2) X0) X1)))))) \end{aligned}$$