

t48_matrprob
(TMRiVWzEDtAJBfcrtUQz6Bkvvs8wPgnSGig)

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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 $k11_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ X1 k1_numbers) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 \\ (k3_finseq_2 k1_numbers))) \Rightarrow (((k3_finseq_1 X0 = k3_finseq_1 X2) \wedge \\ (k3_finseq_1 X1 = k1_matrix_1 X2)) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 \\ X1) k6_numbers) \vee (k23_rvsum_1 (k12_matrixr1 X2 X0) X1 = k23_rvsum_1 \\ X0 (k11_matrixr1 X2 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge \\ (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow ((\neg r1_xxreal_0 (k1_matrix_1 \\ X1) k6_numbers) \Rightarrow ((k3_finseq_1 (k4_matrix_1 X0 X1) = k1_matrix_1 \\ X1) \wedge (k1_matrix_1 (k4_matrix_1 X0 X1) = k3_finseq_1 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((v1_matrix_1 \ X1) \wedge \\ & (m1_finseq_1 \ X1 \ (k3_finseq_2 \ X0)))) \Rightarrow ((v1_matrix_1 \ (k4_matrix_1 \\ & \ X0 \ X1)) \wedge (m2_finseq_1 \ (k4_matrix_1 \ X0 \ X1) \ (k3_finseq_2 \ X0))) \end{aligned} \quad (6)$$

Theorem 1

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