

t48\_matrixr2  
(TMJSYz3u7zCufXj5FFFhzmkAHTw1P9bx5kW)

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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  $k11\_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  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  $v1\_xboole\_0 : \iota \Rightarrow o$  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.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\ & X1 k1\_numbers) \Rightarrow (\forall X2.((v1\_matrix\_1 X2) \wedge (m2\_finseq\_1 X2 \\ & (k3\_finseq\_2 k1\_numbers)) \Rightarrow (((k3\_finseq\_1 X0 = k3\_finseq\_1 X2) \wedge \\ & (k3\_finseq\_1 X1 = k3\_finseq\_1 X0)) \Rightarrow ((r1\_xxreal\_0 (k3\_finseq\_1 \\ & X0) k6\_numbers) \vee (k12\_matrixr1 X2 (k8\_rvsum\_1 X0 X1) = k8\_rvsum\_1 \\ & (k12\_matrixr1 X2 X0) (k12\_matrixr1 X2 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v3\_valued\_0 \\ & X0) \wedge (v1\_finseq\_1 X0)))) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 \\ & X1) \wedge ((v3\_valued\_0 X1) \wedge (v1\_finseq\_1 X1)))) \Rightarrow ((k3\_finseq\_1 X0 = \\ & k3\_finseq\_1 X1) \Rightarrow (k3\_finseq\_1 (k8\_rvsum\_1 X0 X1) = k3\_finseq\_1 \\ & X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_matrix\_1 X1) \wedge \\ (m2\_finseq\_1 X1 (k3\_finseq\_2 X0))) \Rightarrow ((\neg r1\_xxreal\_0 (k1\_matrix\_1 \\ X1) k6\_numbers) \Rightarrow ((k3\_finseq\_1 (k4\_matrix\_1 X0 X1) = k1\_matrix\_1 \\ X1) \wedge (k1\_matrix\_1 (k4\_matrix\_1 X0 X1) = k3\_finseq\_1 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (5)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (6)$$

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.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((v1\_matrix\_1 X1) \wedge \\ (m1\_finseq\_1 X1 (k3\_finseq\_2 X0)))) \Rightarrow ((v1\_matrix\_1 (k4\_matrix\_1 \\ X0 X1)) \wedge (m2\_finseq\_1 (k4\_matrix\_1 X0 X1) (k3\_finseq\_2 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 k1\_numbers) \Rightarrow (v3\_valued\_0 X0) \quad (10)$$

### Theorem 1

$$\begin{aligned} \forall X0.(m2\_finseq\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\ X1 k1\_numbers) \Rightarrow (\forall X2.((v1\_matrix\_1 X2) \wedge (m2\_finseq\_1 X2 \\ (k3\_finseq\_2 k1\_numbers))) \Rightarrow (((k3\_finseq\_1 X0 = k1\_matrix\_1 X2) \wedge \\ (k3\_finseq\_1 X1 = k3\_finseq\_1 X0)) \Rightarrow ((r1\_xxreal\_0 (k3\_finseq\_1 \\ X0) k6\_numbers) \vee ((r1\_xxreal\_0 (k3\_finseq\_1 X2) k6\_numbers) \vee \\ (k11\_matrixr1 X2 (k8\_rvsum\_1 X0 X1) = k8\_rvsum\_1 (k11\_matrixr1 \\ X2 X0) (k11\_matrixr1 X2 X1)))))))))) \end{aligned}$$