

t59\_matrixc1  
(TMLdihAk7NyK8wRRKe87TP7g6fqvZQBo2so)

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Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  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  $k8\_complsp2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_matrixc1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrixc1 : \iota \Rightarrow \iota$  be given. Let  $k12\_matrixc1 : \iota \Rightarrow \iota$  be given. Let  $k13\_matrixc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m2\_finseq\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\
 & \quad X1 k2\_numbers) \Rightarrow (\forall X2.((v1\_matrix\_1 X2) \wedge (m2\_finseq\_1 X2 \\
 & \quad (k3\_finseq\_2 k2\_numbers))) \Rightarrow (((k3\_finseq\_1 X1 = k3\_finseq\_1 X2) \wedge \\
 & \quad (k3\_finseq\_1 X0 = k1\_matrix\_1 X2)) \Rightarrow ((r1\_xxreal\_0 (k3\_finseq\_1 \\
 & \quad X0) k6\_numbers) \vee ((r1\_xxreal\_0 (k3\_finseq\_1 X1) k6\_numbers) \vee \\
 & \quad (k8\_complsp2 (k6\_matrixc1 X2 X0) X1 = k12\_matrixc1 (k13\_matrixc1 \\
 & \quad X0 X1 (k4\_matrix\_1 k2\_numbers X2)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m2\_finseq\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\
 & \quad X1 k2\_numbers) \Rightarrow (\forall X2.((v1\_matrix\_1 X2) \wedge (m2\_finseq\_1 X2 \\
 & \quad (k3\_finseq\_2 k2\_numbers))) \Rightarrow (((k3\_finseq\_1 X0 = k1\_matrix\_1 X2) \wedge \\
 & \quad (k3\_finseq\_1 X1 = k3\_finseq\_1 X2)) \Rightarrow ((r1\_xxreal\_0 (k3\_finseq\_1 \\
 & \quad X0) k6\_numbers) \vee ((r1\_xxreal\_0 (k3\_finseq\_1 X1) k6\_numbers) \vee \\
 & \quad (k8\_complsp2 X0 (k6\_matrixc1 (k2\_matrixc1 X2) X1) = k12\_matrixc1 \\
 & \quad (k13\_matrixc1 X0 X1 (k4\_matrix\_1 k2\_numbers X2)))))))))
 \end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\ & X1 k2\_numbers) \Rightarrow (\forall X2.((v1\_matrix\_1 X2) \wedge (m2\_finseq\_1 X2 \\ & (k3\_finseq\_2 k2\_numbers)))) \Rightarrow (((k3\_finseq\_1 X0 = k1\_matrix\_1 X2) \wedge \\ & (k3\_finseq\_1 X1 = k3\_finseq\_1 X2)) \Rightarrow ((r1\_xxreal\_0 (k1\_matrix\_1 \\ & X2) k6\_numbers) \vee ((r1\_xxreal\_0 (k3\_finseq\_1 X2) k6\_numbers) \vee \\ & (k8\_complsp2 (k6\_matrixc1 X2 X0) X1 = k8\_complsp2 X0 (k6\_matrixc1 \\ & (k2\_matrixc1 X2) X1)))))) \end{aligned}$$