

# t7\_matrix17 (TMHxmyCscdxQUnUJABn- WcxtSsgJ4NYcMg7F)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_matrix17 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k5\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_matrix17 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_matrix\_1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow ( \\ & \quad \forall X2.(m1\_matrix\_1\ X2\ X1\ X0\ X0) \Rightarrow (\forall X3.(m2\_finseq\_1 \\ & \quad X3\ X1) \Rightarrow ((r1\_matrix17\ X1\ X2\ X3) \Rightarrow ((r1\_xxreal\_0\ X0\ k6\_numbers) \vee ( \\ & \quad r1\_matrix17\ X1\ (k5\_matrix\_1\ X0\ X1\ X2)\ X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow ( \\ & \quad \forall X2.(m1\_matrix\_1\ X2\ X1\ X0\ X0) \Rightarrow ((k3\_finseq\_1\ X2 = X0) \wedge ((k1\_matrix\_1 \\ & \quad X2 = X0) \wedge (k2\_matrix\_1\ X2 = k2\_zfmisc\_1\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1 \\ & \quad X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge ((v7\_ordinal1 \\ & \quad X1) \wedge (v7\_ordinal1\ X2))) \Rightarrow (\forall X3.(m1\_matrix\_1\ X3\ X0\ X1\ X2) \Rightarrow \\ & \quad ((v1\_matrix\_1\ X3) \wedge (m2\_finseq\_1\ X3\ (k3\_finseq\_2\ X0)))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0) \wedge ((\neg v1\_xboole\_0 \\ & \quad X1) \wedge (m1\_matrix\_1\ X2\ X1\ X0\ X0))) \Rightarrow (m1\_matrix\_1\ (k5\_matrix\_1\ X0\ X1 \\ & \quad X2)\ X1\ X0\ X0) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1\_matrix\_1 X1) \wedge (m2\_finseq\_1 X1 (k3\_finseq\_2 \\ X0))) \Rightarrow ((v4\_matrix17 X1 X0) \Leftrightarrow (\exists X2. (m2\_finseq\_1 X2 X0) \wedge ( \\ (k3\_finseq\_1 X2 = k1\_matrix\_1 X1) \wedge (r1\_matrix17 X0 X1 X2)))) \end{aligned} \quad (5)$$

**Theorem 1**

$$\begin{aligned} \forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow ( \\ \forall X2. (m1\_matrix\_1 X2 X1 X0 X0) \Rightarrow ((v4\_matrix17 X2 X1) \Rightarrow ((r1\_xreal\_0 \\ X0 k6\_numbers) \vee (v4\_matrix17 (k5\_matrix\_1 X0 X1 X2) X1)))))) \end{aligned}$$