

# t12\_jgraph\_1 (TMdDRhjM- NCHBwf9TXMdreXafBMdorNTBjAQ)

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Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $v3\_topreal1 : \iota \Rightarrow o$  be given. Let  $v1\_goboard5 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 \ X0 \ k5\_numbers) \wedge (v7\_ordinal1 \ X1)) \Rightarrow (k2\_nat\_1 \ X0 \ X1 = k2\_xcmplx\_0 \ X0 \ X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v7\_ordinal1 \ X0) \wedge (m1\_subset\_1 \ X1 \ k5\_numbers)) \Rightarrow (k1\_nat\_1 \ X0 \ X1 = k2\_xcmplx\_0 \ X0 \ X1) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2\_finseq\_1 \ X0 \ (u1\_struct\_0 \ (k15\_euclid \ np\_2))) \Rightarrow \\ & ((v3\_topreal1 \ X0) \Leftrightarrow (\forall X1. (v7\_ordinal1 \ X1) \Rightarrow (\forall X2. \\ & (v7\_ordinal1 \ X2) \Rightarrow ((\neg r1\_xxreal\_0 \ X2 \ (k1\_nat\_1 \ X1 \ np\_1)) \Rightarrow (r1\_xboole\_0 \\ & (k2\_topreal1 \ np\_2 \ X0 \ X1) \ (k2\_topreal1 \ np\_2 \ X0 \ X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_2))) \Rightarrow \\
& ((v1\_goboard5\ X0) \Leftrightarrow (\forall X1.(m1\_subset\_1\ X1\ k5\_numbers) \Rightarrow ( \\
& \forall X2.(m1\_subset\_1\ X2\ k5\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0\ X2\ (k2\_nat\_1 \\
& X1\ np\_1)) \wedge (\neg(\neg(\neg r1\_xxreal\_0\ X1\ np\_1) \wedge (\neg r1\_xxreal\_0\ (k3\_finseq\_1 \\
& X0\ X2)) \wedge (r1\_xxreal\_0\ (k3\_finseq\_1\ X0)\ (k2\_nat\_1\ X2\ np\_1))) \wedge \\
& (\neg r1\_xboole\_0\ (k2\_topreal1\ np\_2\ X0\ X1)\ (k2\_topreal1\ np\_2\ X0\ X2)))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1) \Rightarrow (v7\_ordinal1\ X0) \tag{7}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_2))) \Rightarrow \\
& ((v3\_topreal1\ X0) \Rightarrow (v1\_goboard5\ X0))
\end{aligned}$$