

## l25\_nat\_5

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k21\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k23\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7\_ordinal1 X2) \Rightarrow ((r1\_xxreal\_0 (k23\_binop\_2 X0 X1) (k21\_binop\_2 \\ & X2 np\_1)) \Rightarrow ((\neg r1\_xxreal\_0 X2 X0) \wedge (\neg r1\_xxreal\_0 X2 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (\neg r1\_xxreal\_0 X1 X0))) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (( \\ & X0 \in X1) \Rightarrow ((r1\_xxreal\_0 X0 (k21\_binop\_2 X1 np\_1)) \wedge (m1\_subset\_1 \\ & (k21\_binop\_2 X1 np\_1) k5\_numbers)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\neg \\ & (r1\_xxreal\_0 X0 X1) \wedge (\forall X2.(v7\_ordinal1 X2) \Rightarrow (X1 \neq k2\_xcmplx\_0 \\ & X0 X2)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow (k23\_binop\_2 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \quad (6)$$

### Theorem 1

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (( \\ & \neg r1\_xxreal\_0 X1 X0) \Leftrightarrow (r1\_xxreal\_0 X0 (k21\_binop\_2 X1 np\_1)))))) \end{aligned}$$