

## l15\_int\_5

(TMWVp7nGwgeA7ToX3kB7r7BBUCgN4qbDzHV)

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Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_int\_2 : \iota \Rightarrow o$  be given. Let  $r1\_int\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_int\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_int\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. ((v1\_int\_1 X0) \wedge (v1\_int\_1 X1)) \Rightarrow (v7\_ordinal1 (k3\_int\_2 X0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow ((v1\_int\_2 X0) \Leftrightarrow ((\neg r1\_xxreal\_0 X0 np\_1) \wedge (\forall X1. (v7\_ordinal1 X1) \Rightarrow (\neg (r1\_int\_1 X1 X0) \wedge ((X1 \neq np\_1) \wedge (X1 \neq X0))))))) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_int\_1 X0) \Rightarrow (\forall X1. (v1\_int\_1 X1) \Rightarrow ((r1\_int\_2 X0 X1) \Leftrightarrow (k3\_int\_2 X0 X1 = np\_1))) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_int\_1 X0) \Rightarrow (\forall X1. (v1\_int\_1 X1) \Rightarrow (\forall X2. (v7\_ordinal1 X2) \Rightarrow ((X2 = k3\_int\_2 X0 X1) \Leftrightarrow ((r1\_int\_1 X2 X0) \wedge ((r1\_int\_1 X2 X1) \wedge (\forall X3. (v1\_int\_1 X3) \Rightarrow (((r1\_int\_1 X3 X0) \wedge (r1\_int\_1 X3 X1)) \Rightarrow (r1\_int\_1 X3 X2)))))))))) \quad (4)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (v1\_int\_1 X0) \quad (5)$$

### Theorem 1

$$\forall X0. (v1\_int\_1 X0) \Rightarrow (\forall X1. ((v7\_ordinal1 X1) \wedge (v1\_int\_2 X1)) \Rightarrow ((r1\_int\_2 X0 X1) \vee (r1\_int\_1 X1 X0)))$$