

## t12\_stirl2\_1

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_nat\_1 : \iota \Rightarrow \iota$  be given. Let  $k21\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (v7\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Rightarrow ((r1\_xxreal\_0 X0 (k21\_binop\_2 X1 np\_1)) \wedge (m1\_subset\_1 (k21\_binop\_2 X1 np\_1) k5\_numbers)))) \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0. m2\_subset\_1 (k5\_nat\_1 X0) k1\_numbers k5\_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow \\ & (((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 k5\_numbers))) \Rightarrow \\ & ((X1 = k5\_nat\_1 X0) \Leftrightarrow ((X1 \in X0) \wedge (\forall X2. (v7\_ordinal1 X2) \Rightarrow (( \\ & X2 \in X0) \Rightarrow (r1\_xxreal\_0 X1 X2)))))) \wedge (\neg(\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 \\ & X0 (k1\_zfmisc\_1 k5\_numbers))) \Rightarrow ((X1 = k5\_nat\_1 X0) \Leftrightarrow (X1 = k6\_numbers)))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (8)$$

Assume the following.

$$\forall X0. (v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 k5\_numbers))) \Rightarrow ((r1\_tarski X1 X0) \Rightarrow \\ & (r1\_xxreal\_0 (k5\_nat\_1 X1) (k21\_binop\_2 X0 np\_1)))) \end{aligned}$$