

## t34\_flang\_2

(TMUqmkN5W3AyAHXbCxxzo5gc9Y1mxWqE5Ew)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k2\_flang\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_flang\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_catalan2 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k3\_catalan2 \\ & \quad X0))) \Rightarrow (\forall X2. (v7\_ordinal1 X2) \Rightarrow (\forall X3. (v7\_ordinal1 \\ & \quad X3) \Rightarrow ((k2\_flang\_1 X0 \in X1) \Rightarrow ((r1\_xxreal\_0 X2 X3) \vee (r1\_tarski (k7\_flang\_1 \\ & \quad X0 X1 X3) (k7\_flang\_1 X0 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k8\_afinsq\_1 \\ & \quad X0))) \Rightarrow (\forall X2. (v7\_ordinal1 X2) \Rightarrow (\forall X3. (v7\_ordinal1 \\ & \quad X3) \Rightarrow (\forall X4. (v7\_ordinal1 X4) \Rightarrow (((r1\_xxreal\_0 X2 X3) \wedge (r1\_xxreal\_0 \\ & \quad X3 X4)) \Rightarrow (r1\_tarski (k7\_flang\_1 X0 X1 X3) (k1\_flang\_2 X0 X1 X2 X4)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. (v1\_xxreal\_0 X0) \Rightarrow (\forall X1. (v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X0)) \Rightarrow (X0 = X1)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & \quad (k8\_afinsq\_1 X0))) \Rightarrow (\forall X3. (v7\_ordinal1 X3) \Rightarrow (\forall X4. \\ & \quad (v7\_ordinal1 X4) \Rightarrow ((X1 \in k1\_flang\_2 X0 X2 X3 X4) \Leftrightarrow (\exists X5. (v7\_ordinal1 \\ & \quad X5) \wedge ((r1\_xxreal\_0 X3 X5) \wedge ((r1\_xxreal\_0 X5 X4) \wedge (X1 \in k7\_flang\_1 \\ & \quad X0 X2 X5)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (r1\_xxreal\_0 X0 X0) \tag{5}$$

Assume the following.

$$\forall X0.k3\_catalan2\ X0 = k8\_afinsq\_1\ X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (\forall X3.(v7\_ordinal1\ X3) \Rightarrow (k1\_flang\_2\ X0\ X1\ X2\ X3 = k3\_tarski\ (ReplSep\ (toset\ (\lambda X4 : \iota.m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0)))))) (\lambda X4 : \iota.\exists X5.(v7\_ordinal1\ X5) \wedge ((r1\_xxreal\_0\ X2\ X5) \wedge ((r1\_xxreal\_0\ X5\ X3) \wedge (X4 = k7\_flang\_1\ X0\ X1\ X5)))))) (\lambda X4 : \iota.X4)))) \quad (8) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X1\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (v1\_xxreal\_0\ X0) \quad (10)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (\forall X3.(v7\_ordinal1\ X3) \Rightarrow (((k2\_flang\_1\ X0 \in X1) \wedge (r1\_xxreal\_0\ X2\ X3)) \Rightarrow (k1\_flang\_2\ X0\ X1\ X2\ X3 = k7\_flang\_1\ X0\ X1\ X3)))) \quad (10) \end{aligned}$$