

## l33\_int\_3

(TMY9hYHckpvvcWWd7bf3RD6tDeccUgeFpaK)

October 27, 2020

Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k5\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_int\_3 : \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  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  $k7\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $g6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l4\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l4\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l3\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k7\_int\_3 : \iota \Rightarrow \iota$  be given. Let  $k3\_gr\_cy\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v36\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $u3\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $u2\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $u2\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (\neg r1\_xxreal\_0 X1 X0))) \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k7\_card\_1 X0 = k6\_card\_1 X0) \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((v1\_funct\_1 \\ & X1)\wedge((v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0))))\wedge(((v1\_funct\_1 X2)\wedge \\ & (v1\_funct\_2 X2 (k2\_zfmisc\_1 X0 X0) X0)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0))))\wedge((m1\_subset\_1 X3 X0)\wedge \\ & (m1\_subset\_1 X4 X0))))\Rightarrow(\forall X5.\forall X6.\forall X7.\forall X8. \\ & \forall X9.(g6\_algstr\_0 X0 X1 X2 X3 X4 = g6\_algstr\_0 X5 X6 X7 X8 X9)\Rightarrow \\ & ((X0 = X5)\wedge((X1 = X6)\wedge((X2 = X7)\wedge((X3 = X8)\wedge(X4 = X9)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 X0)\Rightarrow((l2\_algstr\_0 X0)\wedge(l5\_algstr\_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l5\_algstr\_0 X0)\Rightarrow((l4\_algstr\_0 X0)\wedge(l4\_struct\_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(l4\_struct\_0 X0)\Rightarrow((l2\_struct\_0 X0)\wedge(l3\_struct\_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(l6\_algstr\_0 (k9\_int\_3 X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0)\Rightarrow(((v1\_funct\_1 (k7\_int\_3 X0))\wedge((v1\_funct\_2 \\ & (k7\_int\_3 X0) (k2\_zfmisc\_1 (k7\_card\_1 X0) (k7\_card\_1 X0)) (k7\_card\_1 \\ & X0))\wedge(m1\_subset\_1 (k7\_int\_3 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k7\_card\_1 X0) (k7\_card\_1 X0)) (k7\_card\_1 X0)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0)\Rightarrow(((v1\_funct\_1 (k3\_gr\_cy\_1 X0))\wedge( \\ & (v1\_funct\_2 (k3\_gr\_cy\_1 X0) (k2\_zfmisc\_1 (k7\_card\_1 X0) (k7\_card\_1 \\ & X0)) (k7\_card\_1 X0))\wedge(m1\_subset\_1 (k3\_gr\_cy\_1 X0) (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 (k7\_card\_1 X0) (k7\_card\_1 X0)) (k7\_card\_1 \\ & X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.m1\_subset\_1 (k1\_funct\_7 X0 X1) X1 \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (((v1\_funct\_1 \\ & X1) \wedge ((v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0)))))) \wedge (((v1\_funct\_1 X2) \wedge ( \\ & (v1\_funct\_2 X2 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0)))))) \wedge ((m1\_subset\_1 X3 X0) \wedge \\ & (m1\_subset\_1 X4 X0))) \Rightarrow ((v36\_algstr\_0 (g6\_algstr\_0 X0 X1 X2 X3 \\ & X4)) \wedge (l6\_algstr\_0 (g6\_algstr\_0 X0 X1 X2 X3 X4))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (l3\_struct\_0 X0) \Rightarrow (k5\_struct\_0 X0 = u3\_struct\_0 X0) \quad (14)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (k6\_card\_1 X0 = X0) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (k1\_funct\_7 X0 X1 = X0) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7\_ordinal1 X0) \Rightarrow (k9\_int\_3 X0 = g6\_algstr\_0 (k7\_card\_1 \\ & X0) (k3\_gr\_cy\_1 X0) (k7\_int\_3 X0) (k1\_funct\_7 np\_1 (k7\_card\_1 \\ & X0)) (k1\_funct\_7 k6\_numbers (k7\_card\_1 X0))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l6\_algstr\_0 X0) \Rightarrow ((v36\_algstr\_0 X0) \Rightarrow (X0 = g6\_algstr\_0 \\ & (u1\_struct\_0 X0) (u1\_algstr\_0 X0) (u2\_algstr\_0 X0) (u3\_struct\_0 \\ & X0) (u2\_struct\_0 X0))) \end{aligned} \quad (19)$$

**Theorem 1**

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow ((\neg r1\_xxreal\_0 X0 np\_1) \Rightarrow (k5\_struct\_0 (k9\_int\_3 X0) = np\_1))$$