

l60\_series\_3 (TMXxzQP-  
PddE5mjGJQii3NiKib4g2VW39NQQ)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_series\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v4\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 X1) \wedge ((\neg v3\_xxreal\_0 X1) \wedge (\neg v2\_xxreal\_0 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ ((\forall X1.(m1\_subset\_1 X1 k5\_numbers) \Rightarrow (r1\_xxreal\_0 k6\_numbers \\ (k1\_seq\_1 X0 X1))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k5\_numbers) \Rightarrow ( \\ r1\_xxreal\_0 k6\_numbers (k1\_seq\_1 (k3\_series\_1 X0) X1)))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (v3\_xxreal\_0 X1)) \Rightarrow (v3\_xxreal\_0 X0))) \quad (5)$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \quad (6)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k8\_real\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (9)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (10)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v3\_valued\_0 X0))) \Rightarrow (k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1) \quad (12)$$

Assume the following.

$$v6\_membered k4\_ordinal1 \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v4\_valued\_0 X0))) \Rightarrow (v7\_ordinal1 (k1\_funct\_1 X0 X1)) \quad (14)$$

Assume the following.

$$v3\_membered k1\_numbers \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v3\_xxreal\_0 X0)\wedge(v1\_xreal\_0 X0))\wedge((\neg v3\_xxreal\_0 X1)\wedge(v1\_xreal\_0 X1)))\Rightarrow(\neg v3\_xxreal\_0 (k3\_xcmplx\_0 X0 X1)) \quad (16)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (17)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(m1\_subset\_1 (k8\_real\_1 X0 X1) k1\_numbers) \quad (19)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (20)$$

Assume the following.

$$\begin{aligned} &\forall X0.((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 k5\_numbers k1\_numbers)\wedge \\ &(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers))))))\Rightarrow \\ &((v1\_funct\_1 (k3\_series\_1 X0))\wedge((v1\_funct\_2 (k3\_series\_1 X0) \\ &k5\_numbers k1\_numbers)\wedge(m1\_subset\_1 (k3\_series\_1 X0) (k1\_zfmisc\_1 \\ &(k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \end{aligned} \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(m2\_subset\_1 (k2\_nat\_1 X0 X1) k1\_numbers k5\_numbers) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_valued\_0 X0)))\Rightarrow(m1\_subset\_1 (k1\_seq\_1 X0 X1) k1\_numbers) \quad (23)$$

Assume the following.

$$\forall X0.((v1\_xboole\_0 X0)\wedge(v1\_relat\_1 X0))\Rightarrow((v1\_relat\_1 X0)\wedge(v4\_valued\_0 X0)) \quad (24)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers))\Rightarrow(v3\_membered X0) \quad (25)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(v1\_xxreal\_0 X0) \quad (26)$$

Assume the following.

$$\forall X0.((v1\_xreal\_0 X0) \wedge (v2\_xreal\_0 X0)) \Rightarrow ((\neg v1\_xboole\_0 X0) \wedge ((v1\_xreal\_0 X0) \wedge (\neg v3\_xreal\_0 X0))) \quad (27)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_xboole\_0 X0) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_xboole\_0 X2)) \quad (28)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow ((v7\_ordinal1 X0) \wedge (\neg v3\_xreal\_0 X0)) \quad (29)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\neg v3\_xreal\_0 X0) \quad (30)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (31)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (32)$$

Assume the following.

$$\forall X0. \forall X1. (v3\_membered X1) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v3\_valued\_0 X2)) \quad (33)$$

Assume the following.

$$\forall X0. (v6\_membered X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 X0) \Rightarrow (v7\_ordinal1 X1)) \quad (34)$$

Assume the following.

$$\forall X0. (v3\_membered X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 X0) \Rightarrow (v1\_xreal\_0 X1)) \quad (35)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\ & ((\forall X1. (m1\_subset\_1 X1 k5\_numbers) \Rightarrow (r1\_xreal\_0 k6\_numbers \\ & (k1\_seq\_1 X0 X1))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 k5\_numbers) \Rightarrow ( \\ & r1\_xreal\_0 k6\_numbers (k8\_real\_1 (k1\_seq\_1 (k3\_series\_1 X0) \\ & X1) (k1\_seq\_1 X0 (k2\_nat\_1 X1 np\_1)))))) \end{aligned}$$