

t7_jordan5a

(TMQsp5mvLBrwmrhJ2X8XpRUkeHCSJiAcsYF)

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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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v1_fcont_1 : \iota \Rightarrow o$ be given. Let $r1_tmap_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_fcont_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (u1_struct_0 k3_topmetr) \\ & (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 k3_topmetr) (u1_struct_0 k3_topmetr)))))) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 k3_topmetr)) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow (((r1_tmap_1 k3_topmetr \\ & k3_topmetr X0 X1) \wedge ((X0 = X2) \wedge (X1 = X3))) \Rightarrow (r1_fcont_1 X2 X3)))))) \end{aligned} \quad (1)$$

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.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ & X1))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 \\ & X1) (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow ((v5_pre_topc X2 X1 X0) \Leftrightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 X1)) \Rightarrow (r1_tmap_1 X1 X0 \\ & X2 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$u1_struct_0 \ k3_topmetr = k1_numbers \quad (4)$$

Assume the following.

$$(\neg v2_struct_0 \ k3_topmetr) \wedge ((v1_pre_topc \ k3_topmetr) \wedge (v2_pre_topc \ k3_topmetr)) \quad (5)$$

Assume the following.

$$(v2_pre_topc \ k3_topmetr) \wedge (l1_pre_topc \ k3_topmetr) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 \ X1) \wedge (v4_relat_1 \ X1 \ X0)) \Rightarrow (m1_subset_1 \ (k1_relset_1 \ X0 \ X1) \ (k1_zfmisc_1 \ X0)) \quad (7)$$

Assume the following.

$$\forall X0. ((v1_funct_1 \ X0) \wedge (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers)))) \Rightarrow ((v1_fcont_1 \ X0) \Leftrightarrow (\forall X1. (v1_xreal_0 \ X1) \Rightarrow ((X1 \in k1_relset_1 \ k1_numbers \ X0) \Rightarrow (r1_fcont_1 \ X0 \ X1)))) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow ((v4_relat_1 \ X2 \ X0) \wedge (v5_relat_1 \ X2 \ X1)) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ (u1_struct_0 \ k3_topmetr) \\ & (u1_struct_0 \ k3_topmetr)) \wedge ((v5_pre_topc \ X0 \ k3_topmetr \ k3_topmetr) \wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (u1_struct_0 \ k3_topmetr) \\ & (u1_struct_0 \ k3_topmetr)))))) \Rightarrow (\forall X1. ((v1_funct_1 \ X1) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers)))) \Rightarrow \\ & ((X0 = X1) \Rightarrow (v1_fcont_1 \ X1))) \end{aligned}$$