

t68_funct_5

(TMKda6nRztq8X3Pdd3AmfRRafPNv1APnHGY)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_funct_5 : \iota \Rightarrow \iota$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_5 : \iota \Rightarrow \iota$ be given. Let $k2_funct_4 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & \quad (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge \\ & \quad ((v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))))) \Rightarrow ((v1_funct_1 (k1_funct_5 \\ & \quad X3)) \wedge ((v1_funct_2 (k1_funct_5 X3) X0 (k9_funct_2 X1 X2)) \wedge (m1_subset_1 \\ & \quad (k1_funct_5 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 (k9_funct_2 X1 X2)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\ & \quad ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2) \wedge (m1_subset_1 \\ & \quad X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2)))))) \Rightarrow ((v1_funct_1 \\ & \quad (k2_funct_4 X3)) \wedge ((v1_funct_2 (k2_funct_4 X3) (k2_zfmisc_1 X1 \\ & \quad X0) X2) \wedge (m1_subset_1 (k2_funct_4 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad (k2_zfmisc_1 X1 X0) X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k3_funct_5 X0)) \wedge (v1_funct_1 (k3_funct_5 X0))) \tag{3}$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (k3_funct_5 X0 = k1_funct_5 (k2_funct_4 X0)) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & \quad (\forall X2.(\neg v1_xboole_0 X2) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 (k2_zfmisc_1 X1 X0) X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 (k2_zfmisc_1 X1 X0) X2)))))) \Rightarrow ((v1_funct_1 (k3_funct_5 \\ & X3)) \wedge ((v1_funct_2 (k3_funct_5 X3) X0 (k9_funct_2 X1 X2)) \wedge (m1_subset_1 \\ & \quad (k3_funct_5 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 (k9_funct_2 X1 X2)))))))))) \end{aligned}$$