

t55_funct_6 (TMcrPhubFXQv- MoVxum2EGdkiLLGamk3hrYU)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k10_funct_6 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_5 : \iota \Rightarrow \iota$ be given. Let $k4_funct_5 : \iota \Rightarrow \iota$ be given. Let $k1_funct_5 : \iota \Rightarrow \iota$ be given. Let $k3_funct_5 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (k2_zfmisc_1 X0 X1 = k1_xboole_0) \Leftrightarrow ((X0 = k1_xboole_0) \vee (X1 = k1_xboole_0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_relat_1 X3) \wedge \\ & (v1_funct_1 X3)) \Rightarrow ((X3 \in k1_funct_2 X0 (k1_funct_2 X1 X2)) \Rightarrow ((k2_funct_5 \\ & X3 \in k1_funct_2 (k2_zfmisc_1 X0 X1) X2) \wedge (k4_funct_5 X3 \in k1_funct_2 \\ & (k2_zfmisc_1 X1 X0) X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_relat_1 X3) \wedge \\ & (v1_funct_1 X3)) \Rightarrow ((X3 \in k1_funct_2 (k2_zfmisc_1 X0 X1) X2) \Rightarrow ((k2_zfmisc_1 \\ & X0 X1 = k1_xboole_0) \vee ((k1_funct_5 X3 \in k1_funct_2 X0 (k1_funct_2 \\ & X1 X2)) \wedge (k3_funct_5 X3 \in k1_funct_2 X1 (k1_funct_2 X0 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k2_funct_5 X0)) \wedge (v1_funct_1 (k2_funct_5 X0))) \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (k10_funct_6 X0 = k3_funct_5 (k2_funct_5 X0)) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_relat_1 X3) \wedge \\ & (v1_funct_1 X3)) \Rightarrow ((X3 \in k1_funct_2 X0 (k1_funct_2 X1 X2)) \Rightarrow ((X0 = \\ & k1_xboole_0) \vee ((X1 = k1_xboole_0) \vee (k10_funct_6 X3 \in k1_funct_2 \\ & X1 (k1_funct_2 X0 X2)))))) \end{aligned}$$