

t13_diff_2

(TMK7ohrnCRQ31CKEX8r6SbQfx3nsJ9WHwHJ)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_diff_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & \quad X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\
 & \quad (m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow \\
 & \quad (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 X5 k1_numbers k1_numbers) \wedge \\
 & \quad (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow \\
 & \quad (\forall X6.((v1_funct_1 X6) \wedge ((v1_funct_2 X6 k1_numbers k1_numbers) \wedge \\
 & \quad (m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow \\
 & \quad (k1_diff_2 (k3_valued_1 k1_numbers k1_numbers k1_numbers X5 X6) \\
 & \quad X0 X1 X2 X3 X4 = k7_real_1 (k1_diff_2 X5 X0 X1 X2 X3 X4) (k1_diff_2 X6 \\
 & \quad \quad X0 X1 X2 X3 X4)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & \quad X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\
 & \quad (m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow \\
 & \quad (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (\forall X6.((v1_funct_1 \\
 & \quad X6) \wedge ((v1_funct_2 X6 k1_numbers k1_numbers) \wedge (m1_subset_1 X6 (\\
 & \quad k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow (k1_diff_2 \\
 & \quad (k26_valued_1 k1_numbers k1_numbers X6 X0) X1 X2 X3 X4 X5 = k8_real_1 \\
 & \quad \quad X0 (k1_diff_2 X6 X1 X2 X3 X4 X5)))))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow(k26_valued_1\ X0\ X1\ X2\ X3 = k24_valued_1 \\ & X2\ X3) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1_xboole_0 \\ & X1)\wedge(v3_membered\ X1))\wedge(((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X0\ X1)\wedge \\ & (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))))\wedge(v1_xreal_0 \\ & X3)))\Rightarrow((v1_funct_1\ (k24_valued_1\ X2\ X3))\wedge(v1_partfun1\ (k24_valued_1 \\ & X2\ X3)\ X0)) \end{aligned} \tag{4}$$

Assume the following.

$$v3_membered\ k1_numbers \tag{5}$$

Assume the following.

$$\neg v1_xboole_0\ k1_numbers \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow((v1_funct_1\ (k26_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k26_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers)))) \end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v1_partfun1\ X2\ X0)\Rightarrow(v1_funct_2\ X2\ X0\ X1)) \end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \tag{9}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (\forall X6.(m1_subset_1 \\ & X6 k1_numbers) \Rightarrow (\forall X7.((v1_funct_1 X7) \wedge ((v1_funct_2 X7 \\ & k1_numbers k1_numbers) \wedge (m1_subset_1 X7 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers)))))) \Rightarrow (\forall X8.((v1_funct_1 X8) \wedge ((\\ & v1_funct_2 X8 k1_numbers k1_numbers) \wedge (m1_subset_1 X8 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow (k1_diff_2 (k3_valued_1 \\ & k1_numbers k1_numbers k1_numbers (k26_valued_1 k1_numbers k1_numbers \\ & X7 X0) (k26_valued_1 k1_numbers k1_numbers X8 X1)) X2 X3 X4 X5 X6 = \\ & k7_real_1 (k8_real_1 X0 (k1_diff_2 X7 X2 X3 X4 X5 X6)) (k8_real_1 \\ & X1 (k1_diff_2 X8 X2 X3 X4 X5 X6)))))))))) \end{aligned}$$