

t35_diff_4

(TMYK7eEkP2vxD7teAm8HvjwYMH2JSYRbo5Q)

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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 $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_diff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_diff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 \\ & k1_numbers k1_numbers) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers)))))) \Rightarrow (k3_funct_2 k1_numbers k1_numbers \\ & (k3_diff_1 X2 X0) X1 = k9_real_1 (k3_funct_2 k1_numbers k1_numbers \\ & X2 (k7_real_1 X1 X0)) (k3_funct_2 k1_numbers k1_numbers X2 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k1_numbers \\ & k1_numbers) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\ & k1_numbers)))))) \wedge (v1_xreal_0 X1)) \Rightarrow ((v1_funct_1 (k2_diff_1 X0 \\ & X1)) \wedge ((v1_funct_2 (k2_diff_1 X0 X1) k1_numbers k1_numbers) \wedge (\\ & m1_subset_1 (k2_diff_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\ & k1_numbers)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k1_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow \\ & (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge (\\ & v1_funct_2 X2 k1_numbers k1_numbers) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow ((X2 = k2_diff_1 X0 X1) \Leftrightarrow \\ & (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow (k3_funct_2 k1_numbers \\ & k1_numbers X2 X3 = k3_funct_2 k1_numbers k1_numbers X0 (k7_real_1 \\ & X3 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 \\ & k1_numbers k1_numbers) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers)))))) \Rightarrow (k3_funct_2 k1_numbers k1_numbers \\ & (k3_diff_1 X2 X0) X1 = k9_real_1 (k3_funct_2 k1_numbers k1_numbers \\ & (k2_diff_1 X2 X0) X1) (k3_funct_2 k1_numbers k1_numbers X2 X1)))) \end{aligned}$$