

t37_fdifff_7

(TMVFda8FqpxF6QKHnyqH395iQyLNBnnbQes)

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Let $v3_rcomp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $k24_sin_cos : \iota$ be given. Let $r2_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v3_rcomp_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))) \Rightarrow \\ (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ k1_numbers k1_numbers)))) \Rightarrow ((r2_fdiff_1 X1 X0) \Leftrightarrow ((r1_tarski X0 \\ (k1_relset_1 k1_numbers X1)) \wedge (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow \\ ((X2 \in X0) \Rightarrow (r1_fdiff_1 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_fdiff_1 k24_sin_cos X0) \wedge (k1_fdiff_1 \\ k24_sin_cos X0 = k1_seq_1 k24_sin_cos X0)) \tag{2}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_fdiff_1 k16_sin_cos X0) \wedge (k1_fdiff_1 \\ k16_sin_cos X0 = k1_seq_1 k19_sin_cos X0)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\ & X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers)))) \Rightarrow (((r1_fdiff_1 X1 X0) \wedge (r1_fdiff_1 \\ & X2 (k1_seq_1 X1 X0))) \Rightarrow ((r1_fdiff_1 (k1_partfun1 k1_numbers k1_numbers \\ & k1_numbers k1_numbers X1 X2) X0) \wedge (k1_fdiff_1 (k1_partfun1 k1_numbers \\ & k1_numbers k1_numbers k1_numbers X1 X2) X0 = k8_real_1 (k1_fdiff_1 \\ & X2 (k1_seq_1 X1 X0)) (k1_fdiff_1 X1 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3)))))) \Rightarrow (k1_partfun1 X0 X1 X2 X3 X4 X5 = k3_relat_1 X4 X5) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (v1_xreal_0 (k1_funct_1 X0 X1)) \quad (7)$$

Assume the following.

$$v3_membered k1_numbers \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow ((v1_funct_1 (k2_fdiff_1 \\ & X0 X1)) \wedge (m1_subset_1 (k2_fdiff_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k24_sin_cos) \wedge ((v1_funct_2 k24_sin_cos k1_numbers \\ & k1_numbers) \wedge (m1_subset_1 k24_sin_cos (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3)))))) \Rightarrow ((v1_funct_1 (k1_partfun1 X0 X1 X2 X3 X4 X5)) \wedge (m1_subset_1 \\ & (k1_partfun1 X0 X1 X2 X3 X4 X5) (k1_zfmisc_1 (k2_zfmisc_1 X0 X3)))) \end{aligned} \quad (11)$$

Assume the following.

$$(v1_funct_1\ k16_sin_cos) \wedge ((v1_funct_2\ k16_sin_cos\ k1_numbers\ k1_numbers) \wedge (m1_subset_1\ k16_sin_cos\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1\ X0) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \Rightarrow (\forall X1. (r2_fdiff_1\ X0\ X1) \Rightarrow (\forall X2. \\ & ((v1_funct_1\ X2) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \Rightarrow ((X2 = k2_fdiff_1\ X0\ X1) \Leftrightarrow ((k1_relset_1\ k1_numbers\ X2 = X1) \wedge (\forall X3. (m1_subset_1\ X3\ k1_numbers) \Rightarrow ((X3 \in X1) \Rightarrow (k1_seq_1\ X2\ X3 = k1_fdiff_1\ X0\ X3)))))) \quad (13) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))) \Rightarrow (v1_relat_1\ X2) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. (v3_membered\ X1) \Rightarrow (\forall X2. (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))) \Rightarrow (v3_valued_0\ X2)) \quad (15)$$

Assume the following.

$$\forall X0. (v3_membered\ X0) \Rightarrow (\forall X1. (m1_subset_1\ X1\ X0) \Rightarrow (v1_xreal_0\ X1)) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v3_rcomp_1\ X0) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers))) \Rightarrow \\ & ((r1_tarski\ X0\ (k1_relset_1\ k1_numbers\ (k1_partfun1\ k1_numbers\ k1_numbers\ k1_numbers\ k1_numbers\ k16_sin_cos\ k24_sin_cos))) \Rightarrow \\ & ((r2_fdiff_1\ (k1_partfun1\ k1_numbers\ k1_numbers\ k1_numbers\ k1_numbers\ k16_sin_cos\ k24_sin_cos)\ X0) \wedge (\forall X1. (m1_subset_1\ X1\ k1_numbers) \Rightarrow \\ & ((X1 \in X0) \Rightarrow (k1_seq_1\ (k2_fdiff_1\ (k1_partfun1\ k1_numbers\ k1_numbers\ k1_numbers\ k1_numbers\ k16_sin_cos\ k24_sin_cos)\ X0)\ X1 = k8_real_1\ (k1_seq_1\ k24_sin_cos\ (k1_seq_1\ k16_sin_cos\ X1))\ (k1_seq_1\ k19_sin_cos\ X1)))))) \end{aligned}$$