

146_hfdiff_1 (TMFXWmJH- hubX2rQiETnzC8WTCBVZ6nQBRdh)

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Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_taylor_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k4_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow \\ & (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((\forall X4. (m1_subset_1 \\ & X4 X0) \Rightarrow (k1_funct_1 X2 X4 = k1_funct_1 X3 X4)) \Rightarrow (r2_relset_1 X0 X1 \\ & X2 X3))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (k4_prepower X0 np_1 = X0) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (k1_funct_1 (k4_relat_1 X1) X0 = X0) \tag{4}$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. k6_partfun1 \ X0 = k4_relat_1 \ X0 \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v3_valued_0 \\ & \ X0))) \Rightarrow (k1_seq_1 \ X0 \ X1 = k1_funct_1 \ X0 \ X1) \end{aligned} \quad (8)$$

Assume the following.

$$v3_membered \ k1_numbers \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_relat_1 \ (k4_relat_1 \ X0)) \wedge ((v4_relat_1 \ (k4_relat_1 \\ & \ X0) \ X0) \wedge ((v1_funct_1 \ (k4_relat_1 \ X0)) \wedge (v1_partfun1 \ (k4_relat_1 \\ & \ X0) \ X0))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_partfun1 \ (k6_partfun1 \ X0) \ X0) \wedge (m1_subset_1 \ (k6_partfun1 \\ & \ X0) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_int_1 \ X0) \Rightarrow ((v1_funct_1 \ (k1_taylor_1 \ X0)) \wedge ((v1_funct_2 \\ & \ (k1_taylor_1 \ X0) \ k1_numbers \ k1_numbers) \wedge (m1_subset_1 \ (k1_taylor_1 \\ & \ X0) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_int_1 \ X0) \Rightarrow (\forall X1. ((v1_funct_1 \ X1) \wedge ((v1_funct_2 \\ & \ X1 \ k1_numbers \ k1_numbers) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & \ k1_numbers \ k1_numbers)))))) \Rightarrow ((X1 = k1_taylor_1 \ X0) \Leftrightarrow (\forall X2. \\ & \ (v1_xreal_0 \ X2) \Rightarrow (k1_seq_1 \ X1 \ X2 = k4_prepower \ X2 \ X0)))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (15)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v5_relat_1 X0 k1_numbers)) \Rightarrow ((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (17)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_int_1 X0) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v1_partfun1 X2 X0) \Rightarrow (v1_funct_2 X2 X0 X1)) \quad (20)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (21)$$

Theorem 1

$$r2_relset_1 k1_numbers k1_numbers (k1_taylor_1 np_1) (k6_partfun1 k1_numbers)$$