

t6_rvsum_1

(TMXZEx5dv6Rwr8VGg3vMF9p2eUxGqWExw4a)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r7_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k3_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k33_binop_2 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r6_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $k35_binop_2 : \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $k5_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v5_valued_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\
 & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 \\
 & X0) X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\
 & X0 X0) X0)))) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (\\
 & k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & (k2_zfmisc_1 X0 X0) X0)))) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 \\
 & X4 X0 X0) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow \\
 & (((r6_binop_1 X0 X2 X3) \wedge (r2_funct_2 X0 X0 X4 (k10_funcop_1 X0 X0 \\
 & X2 X1 (k6_partfun1 X0)))) \Rightarrow (r7_binop_1 X0 X4 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$r6_binop_1 k1_numbers k35_binop_2 k33_binop_2 \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2)\wedge \\ & ((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow(r2_funct_2 X0 X1 X2 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.k6_partfun1 X0 = k4_relat_1 X0 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\ & X0)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) \\ & X0)))))\wedge((m1_subset_1 X3 X0)\wedge((v1_funct_1 X4)\wedge((v1_funct_2 \\ & X4 X1 X0)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0))))))))\Rightarrow \\ & (k10_funcop_1 X0 X1 X2 X3 X4 = k5_funcop_1 X2 X3 X4) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\exists X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))\wedge((v1_relat_1 X2)\wedge((v4_relat_1 \\ & X2 X0)\wedge((v5_relat_1 X2 X1)\wedge((v1_funct_1 X2)\wedge(v1_partfun1 X2 X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow((v1_funct_1 (k4_relat_1 X0))\wedge((v1_funct_2 (k4_relat_1 X0) X0 X0)\wedge(v5_valued_0 (k4_relat_1 X0)))) \quad (8)$$

Assume the following.

$$v3_membered k1_numbers \quad (9)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_partfun1 (k6_partfun1 X0) X0)\wedge(m1_subset_1 (k6_partfun1 X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0)\Rightarrow(((v1_funct_1 (k3_rvsum_1 X0))\wedge((\\ & v1_funct_2 (k3_rvsum_1 X0) k1_numbers k1_numbers)\wedge(m1_subset_1 \\ & (k3_rvsum_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \end{aligned} \quad (12)$$

Assume the following.

$$(v1_funct_1 \ k35_binop_2) \wedge ((v1_funct_2 \ k35_binop_2 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers) \wedge (m1_subset_1 \ k35_binop_2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers)))) \quad (13)$$

Assume the following.

$$(v1_funct_1 \ k33_binop_2) \wedge ((v1_funct_2 \ k33_binop_2 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers) \wedge (m1_subset_1 \ k33_binop_2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers)))) \quad (14)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (k3_rvsum_1 \ X0 = k5_funcop_1 \ k35_binop_2 \ X0 \ (k6_partfun1 \ k1_numbers)) \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Leftrightarrow (X0 \in k1_numbers) \quad (16)$$

Assume the following.

$$\forall X0.(v3_membered \ X0) \Rightarrow (v2_membered \ X0) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow ((v1_partfun1 \ X2 \ X0) \Rightarrow (v1_funct_2 \ X2 \ X0 \ X1)) \quad (18)$$

Theorem 1

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (r7_binop_1 \ k1_numbers \ (k3_rvsum_1 \ X0) \ k33_binop_2)$$