

l36_integra6 (TM-
Pqw8fnrxsLwU2xuSpBC3hgVSKhQU2Ma1z)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_integra5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_integra5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((X0 \in k1_xxreal_1 X1 X2) \Leftrightarrow ((r1_xxreal_0 X1 X0) \wedge \\ & (r1_xxreal_0 X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\forall X4.((v1_funct_1 \\ & X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2) \wedge (r1_xxreal_0 X2 X3) \wedge \\ & ((r1_integra5 (k3_integra5 X0 X3) X4) \wedge ((v1_comseq_2 (k2_partfun1 \\ & k1_numbers k1_numbers X4 (k3_integra5 X0 X3))) \wedge (r1_tarski (k3_integra5 \\ & X0 X3) (k9_xtuple_0 X4)))))) \Rightarrow ((r1_integra5 (k3_integra5 X1 X2) \\ & X4) \wedge ((v1_comseq_2 (k2_partfun1 k1_numbers k1_numbers X4 (k3_integra5 \\ & X1 X2))) \wedge (r1_tarski (k3_integra5 X1 X2) (k9_xtuple_0 X4)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 \\ & (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow (((r1_xxreal_0 \\ & X0 X1) \wedge ((r1_tarski (k3_integra5 X0 X1) (k9_xtuple_0 X3)) \wedge ((r1_integra5 \\ & (k3_integra5 X0 X1) X3) \wedge (v1_comseq_2 (k2_partfun1 k1_numbers \\ & k1_numbers X3 (k3_integra5 X0 X1)))))) \Rightarrow (k4_integra5 X0 X1 (k26_valued_1 \\ & k1_numbers k1_numbers X3 X2) = k4_real_1 X2 (k4_integra5 X0 X1 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (k1_rcomp_1 X0 X1 = k1_xxreal_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (k3_integra5 X0 X1 = k1_rcomp_1 X0 X1))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\forall X4.(v1_xreal_0 \\ & X4) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge \\ & ((r1_xxreal_0 X2 X3) \wedge ((r1_integra5 (k3_integra5 X0 X1) X5) \wedge ((\\ & v1_comseq_2 (k2_partfun1 k1_numbers k1_numbers X5 (k3_integra5 \\ & X0 X1))) \wedge ((r1_tarski (k3_integra5 X0 X1) (k9_xtuple_0 X5)) \wedge ((\\ & X2 \in k3_integra5 X0 X1) \wedge (X3 \in k3_integra5 X0 X1)))))) \Rightarrow (k4_integra5 \\ & X2 X3 (k26_valued_1 k1_numbers k1_numbers X5 X4) = k4_real_1 X4 (\\ & k4_integra5 X2 X3 X5)))))) \end{aligned}$$