

t22_integra7 (TMcNiFLmyuk- mqD4MUhTGHPU5zs7akHnzhh2)

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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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_fcont_1 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_integra7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_integra5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_integra5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\
 & \forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & k1_numbers k1_numbers)))) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 \\
 & X4 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X5. \\
 & ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\
 & k1_numbers)))) \Rightarrow (\forall X6.((v1_funct_1 X6) \wedge (m1_subset_1 X6 \\
 & (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (((r1_xxreal_0 \\
 & X0 X1) \wedge ((r1_tarski (k3_integra5 X0 X1) X2) \wedge ((r1_integra5 (k3_integra5 \\
 & X0 X1) X3) \wedge ((r1_integra5 (k3_integra5 X0 X1) X4) \wedge ((v1_comseq_2 \\
 & (k2_partfun1 k1_numbers k1_numbers X3 (k3_integra5 X0 X1))) \wedge \\
 & (v1_comseq_2 (k2_partfun1 k1_numbers k1_numbers X4 (k3_integra5 \\
 & X0 X1))) \wedge ((r1_tarski X2 (k1_relset_1 k1_numbers X3)) \wedge ((r1_tarski \\
 & X2 (k1_relset_1 k1_numbers X4)) \wedge ((r1_integra7 X2 X5 X3) \wedge (r1_integra7 \\
 & X2 X6 X4)))))) \Rightarrow (k9_real_1 (k8_real_1 (k1_seq_1 X5 X1) (k1_seq_1 \\
 & X6 X1)) (k8_real_1 (k1_seq_1 X5 X0) (k1_seq_1 X6 X0)) = k7_real_1 \\
 & (k4_integra5 X0 X1 (k20_valued_1 k1_numbers k1_numbers k1_numbers \\
 & X3 X6)) (k4_integra5 X0 X1 (k20_valued_1 k1_numbers k1_numbers \\
 & k1_numbers X5 X4)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\
& \forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k1_numbers k1_numbers)))) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge ((r1_tarski \\
& (k1_rcomp_1 X0 X1) X2) \wedge ((r1_tarski X2 (k1_relset_1 k1_numbers \\
& X3)) \wedge (v1_fcont_1 (k2_partfun1 k1_numbers k1_numbers X3 X2)))))) \Rightarrow \\
& ((v1_fcont_1 (k2_partfun1 k1_numbers k1_numbers X3 (k3_integra5 \\
& X0 X1))) \wedge ((r1_integra5 (k3_integra5 X0 X1) X3) \wedge (v1_comseq_2 (\\
& k2_partfun1 k1_numbers k1_numbers X3 (k3_integra5 X0 X1))))))))) \quad (2)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 \\
& X0 X1) \Rightarrow (k3_integra5 X0 X1 = k1_rcomp_1 X0 X1))) \quad (3)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\
& \forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k1_numbers k1_numbers)))) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 \\
& X4 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X5. \\
& ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\
& k1_numbers)))) \Rightarrow (\forall X6.((v1_funct_1 X6) \wedge (m1_subset_1 X6 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (((r1_xxreal_0 \\
& X0 X1) \wedge ((r1_tarski (k1_rcomp_1 X0 X1) X2) \wedge ((r1_tarski X2 (k1_relset_1 \\
& k1_numbers X3)) \wedge ((r1_tarski X2 (k1_relset_1 k1_numbers X4)) \wedge \\
& ((v1_fcont_1 (k2_partfun1 k1_numbers k1_numbers X3 X2)) \wedge ((v1_fcont_1 \\
& (k2_partfun1 k1_numbers k1_numbers X4 X2)) \wedge ((r1_integra7 X2 X5 \\
& X3) \wedge (r1_integra7 X2 X6 X4)))))) \Rightarrow (k9_real_1 (k8_real_1 (k1_seq_1 \\
& X5 X1) (k1_seq_1 X6 X1)) (k8_real_1 (k1_seq_1 X5 X0) (k1_seq_1 X6 \\
& X0)) = k7_real_1 (k4_integra5 X0 X1 (k20_valued_1 k1_numbers k1_numbers \\
& k1_numbers X3 X6)) (k4_integra5 X0 X1 (k20_valued_1 k1_numbers \\
& k1_numbers k1_numbers X5 X4)))))))))
\end{aligned}$$