

t105_euclid_8

(TMcR1U9w2Z9mXzYogqnb6zxt2jotmG8uoe7)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_euclid_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k9_euclid : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_euclid : \iota \Rightarrow \iota$ be given. Let $k1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\
 & X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\
 & (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & k1_numbers k1_numbers)))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 \\
 & X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X4. \\
 & (m1_subset_1 X4 k1_numbers) \Rightarrow (((r1_fdiff_1 X1 X4) \wedge ((r1_fdiff_1 \\
 & X2 X4) \wedge (r1_fdiff_1 X3 X4))) \Rightarrow (k8_euclid_8 (k26_valued_1 k1_numbers \\
 & k1_numbers X1 X0) (k26_valued_1 k1_numbers k1_numbers X2 X0) (k26_valued_1 \\
 & k1_numbers k1_numbers X3 X0) X4 = k9_euclid np_3 (k8_euclid_8 X1 \\
 & X2 X3 X4) X0))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad k1_numbers k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 \\
& \quad X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X2. \\
& ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\
& \quad k1_numbers)))) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 \\
& \quad (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\
& \quad k1_numbers)))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge (m1_subset_1 X5 \\
& \quad (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 k1_numbers) \Rightarrow (((r1_fdiff_1 X0 X6) \wedge ((r1_fdiff_1 \\
& X1 X6) \wedge ((r1_fdiff_1 X2 X6) \wedge ((r1_fdiff_1 X3 X6) \wedge ((r1_fdiff_1 X4 \\
& X6) \wedge (r1_fdiff_1 X5 X6)))))) \Rightarrow (k8_euclid_8 (k3_valued_1 k1_numbers \\
& k1_numbers k1_numbers X0 X3) (k3_valued_1 k1_numbers k1_numbers \\
& k1_numbers X1 X4) (k3_valued_1 k1_numbers k1_numbers k1_numbers \\
& X2 X5) X6 = k7_euclid np_3 (k8_euclid_8 X0 X1 X2 X6) (k8_euclid_8 \\
& \quad X3 X4 X5 X6)))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(v7_ordinal1 \\
& X1) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers (k1_euclid X1)) \Rightarrow (\\
& \quad \forall X3.(m2_finseq_2 X3 k1_numbers (k1_euclid X1)) \Rightarrow (k9_euclid \\
& X1 (k7_euclid X1 X2 X3) X0 = k7_euclid X1 (k9_euclid X1 X2 X0) (k9_euclid \\
& \quad X1 X3 X0))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\
& X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad k1_numbers k1_numbers)))) \Rightarrow (((r1_fdiff_1 X1 X0) \wedge (r1_fdiff_1 \\
& X2 X0)) \Rightarrow ((r1_fdiff_1 (k3_valued_1 k1_numbers k1_numbers k1_numbers \\
& X1 X2) X0) \wedge (k1_fdiff_1 (k3_valued_1 k1_numbers k1_numbers k1_numbers \\
& X1 X2) X0 = k7_real_1 (k1_fdiff_1 X1 X0) (k1_fdiff_1 X2 X0))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers))
\end{aligned} \tag{5}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{6}$$

Assume the following.

$$v6_membered k4_ordinal1 \tag{7}$$

Assume the following.

$$v3_membered\ k1_numbers \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1\ X0)\wedge \\ & (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers))))\wedge \\ & (((v1_funct_1\ X1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & k1_numbers\ k1_numbers))))\wedge(((v1_funct_1\ X2)\wedge(m1_subset_1\ X2 \\ & (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers))))\wedge(m1_subset_1 \\ & X3\ k1_numbers))))\Rightarrow(m2_finseq_2\ (k8_euclid_8\ X0\ X1\ X2\ X3)\ k1_numbers \\ & (k1_euclid\ np_3)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3_membered \\ & X1)\wedge((v3_membered\ X2)\wedge(((v1_funct_1\ X3)\wedge(m1_subset_1\ X3\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1))))\wedge((v1_funct_1\ X4)\wedge(m1_subset_1\ X4\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X2))))))\Rightarrow((v1_funct_1\ (k3_valued_1\ X0\ X1\ X2\ X3 \\ & X4))\wedge(m1_subset_1\ (k3_valued_1\ X0\ X1\ X2\ X3\ X4)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v7_ordinal1\ X1)) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(\forall X1.((v1_funct_1 \\ & X1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers))))\Rightarrow \\ & (\forall X2.((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & k1_numbers\ k1_numbers))))\Rightarrow(\forall X3.((v1_funct_1\ X3)\wedge(m1_subset_1 \\ & X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers))))\Rightarrow(\forall X4. \\ & ((v1_funct_1\ X4)\wedge(m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers \\ & k1_numbers))))\Rightarrow(\forall X5.((v1_funct_1\ X5)\wedge(m1_subset_1\ X5 \\ & (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers))))\Rightarrow(\forall X6. \\ & ((v1_funct_1\ X6)\wedge(m1_subset_1\ X6\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers \\ & k1_numbers))))\Rightarrow(\forall X7.(m1_subset_1\ X7\ k1_numbers)\Rightarrow(((\\ & r1_fdiff_1\ X1\ X7)\wedge((r1_fdiff_1\ X2\ X7)\wedge((r1_fdiff_1\ X3\ X7)\wedge((r1_fdiff_1 \\ & X4\ X7)\wedge((r1_fdiff_1\ X5\ X7)\wedge(r1_fdiff_1\ X6\ X7))))))\Rightarrow(k8_euclid_8 \\ & (k26_valued_1\ k1_numbers\ k1_numbers\ (k3_valued_1\ k1_numbers \\ & k1_numbers\ k1_numbers\ X1\ X4)\ X0)\ (k26_valued_1\ k1_numbers\ k1_numbers \\ & (k3_valued_1\ k1_numbers\ k1_numbers\ k1_numbers\ X2\ X5)\ X0)\ (k26_valued_1 \\ & k1_numbers\ k1_numbers\ (k3_valued_1\ k1_numbers\ k1_numbers\ k1_numbers \\ & X3\ X6)\ X0)\ X7 = k7_euclid\ np_3\ (k9_euclid\ np_3\ (k8_euclid_8\ X1\ X2 \\ & X3\ X7)\ X0)\ (k9_euclid\ np_3\ (k8_euclid_8\ X4\ X5\ X6\ X7)\ X0)))))) \end{aligned}$$