

t104_euclid_8

(TMWZqqJHzP62LuJ5KMhpTScsvck5ZYphs1m)

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 $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_euclid_8 : \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_euclid_8 : \iota$ be given. Let $k4_euclid_8 : \iota$ be given. Let $k1_euclid_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ 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.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
 & X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3. \\
 & (m1_subset_1 X3 k1_numbers) \Rightarrow (k9_euclid np_3 (k1_euclid_8 X1 \\
 & X2 X3) X0 = k7_euclid np_3 (k7_euclid np_3 (k9_euclid np_3 k2_euclid_8 \\
 & (k11_binop_2 X0 X1)) (k9_euclid np_3 k3_euclid_8 (k11_binop_2 \\
 & X0 X2))) (k9_euclid np_3 k4_euclid_8 (k11_binop_2 X0 X3))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\ (k2_zfmisc_1 k1_numbers k1_numbers)))) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 \\ (k1_fdiff_1 X0 X1) k1_numbers) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ k1_numbers k1_numbers)))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 \\ X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X2. \\ ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\ k1_numbers)))) \Rightarrow (\forall X3. (m1_subset_1 X3 k1_numbers) \Rightarrow (k8_euclid_8 \\ X0 X1 X2 X3 = k1_euclid_8 (k1_fdiff_1 X0 X3) (k1_fdiff_1 X1 X3) (k1_fdiff_1 \\ X2 X3)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1. ((v1_funct_1 \\ X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ (\forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ k1_numbers k1_numbers)))) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 \\ X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow (\forall X4. \\ (m1_subset_1 X4 k1_numbers) \Rightarrow (((r1_fdiff_1 X1 X4) \wedge ((r1_fdiff_1 \\ X2 X4) \wedge (r1_fdiff_1 X3 X4))) \Rightarrow (k8_euclid_8 (k26_valued_1 k1_numbers \\ k1_numbers X1 X0) (k26_valued_1 k1_numbers k1_numbers X2 X0) (k26_valued_1 \\ k1_numbers k1_numbers X3 X0) X4 = k7_euclid_np_3 (k7_euclid_np_3 \\ (k9_euclid_np_3 k2_euclid_8 (k11_binop_2 X0 (k1_fdiff_1 X1 X4))) \\ (k9_euclid_np_3 k3_euclid_8 (k11_binop_2 X0 (k1_fdiff_1 X2 X4)))) \\ (k9_euclid_np_3 k4_euclid_8 (k11_binop_2 X0 (k1_fdiff_1 X3 X4)))))))))) \end{aligned}$$