

t41_jgraph_7 (TM-
FEnLFtQMYco83Utbww9SNQn7QSTDJctWP)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_jordan17 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_sppol_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X2.(v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\forall X4. \\
 & (v1_xreal_0 X4) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow (((k18_euclid X0 = \\
 & X5) \wedge ((k17_euclid X1 = X3) \wedge ((r1_xxreal_0 X2 (k17_euclid X0)) \wedge \\
 & (r1_xxreal_0 (k17_euclid X0) X3) \wedge ((r1_xxreal_0 X4 (k18_euclid \\
 & X1)) \wedge (r1_xxreal_0 (k18_euclid X1) X5)))))) \Rightarrow ((r1_xxreal_0 X3 \\
 & X2) \vee ((r1_xxreal_0 X5 X4) \vee (r1_jordan6 (k1_sppol_2 X2 X3 X4 X5) X0 \\
 & X1))))))))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\
 & (v1_xxreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow \\
 & (r1_xxreal_0 X0 X2)))) \tag{2}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
 & (\forall X2.(v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\forall X4. \\
 & (v1_xreal_0 X4) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow (((k17_euclid X0 = \\
 & X3) \wedge ((k18_euclid X1 = X4) \wedge ((r1_xxreal_0 X4 (k18_euclid X0)) \wedge \\
 & (r1_xxreal_0 (k18_euclid X0) X5) \wedge (r1_xxreal_0 (k17_euclid X1 \\
 & X3)))) \Rightarrow ((r1_xxreal_0 X3 X2) \vee ((r1_xxreal_0 X5 X4) \vee ((r1_xxreal_0 \\
 & (k17_euclid X1) X2) \vee (r1_jordan6 (k1_sppol_2 X2 X3 X4 X5) X0 X1))))))))) \tag{3}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X2.(v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\forall X4. \\
& (v1_xreal_0 X4) \Rightarrow (\forall X5.(v1_xreal_0 X5) \Rightarrow (((k17_euclid X0 = \\
& X3) \wedge ((k17_euclid X1 = X3) \wedge (r1_xxreal_0 X4 (k18_euclid X1)) \wedge (\\
& r1_xxreal_0 (k18_euclid X0) X5)))))) \Rightarrow ((r1_xxreal_0 X3 X2) \vee ((r1_xxreal_0 \\
& X5 X4) \vee ((r1_xxreal_0 (k18_euclid X0) (k18_euclid X1)) \vee (r1_jordan6 \\
& (k1_sppol_2 X2 X3 X4 X5) X0 X1)))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v1_xreal_0 X0) \wedge \\
& ((v1_xreal_0 X1) \wedge ((v1_xreal_0 X2) \wedge (v1_xreal_0 X3)))) \Rightarrow (m1_subset_1 \\
& (k1_sppol_2 X0 X1 X2 X3) (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& np_2))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (m1_subset_1 (k18_euclid X0) k1_numbers)
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\
& np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid \\
& np_2))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\
& np_2))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 (k15_euclid \\
& np_2)))) \Rightarrow ((r1_jordan17 X0 X1 X2 X3 X4) \Leftrightarrow (\neg(\neg(r1_jordan6 X0 X1 X2) \wedge \\
& ((r1_jordan6 X0 X2 X3) \wedge (r1_jordan6 X0 X3 X4))) \wedge ((\neg(r1_jordan6 \\
& X0 X2 X3) \wedge ((r1_jordan6 X0 X3 X4) \wedge (r1_jordan6 X0 X4 X1))) \wedge ((\neg(r1_jordan6 \\
& X0 X3 X4) \wedge ((r1_jordan6 X0 X4 X1) \wedge (r1_jordan6 X0 X1 X2))) \wedge (\neg(r1_jordan6 \\
& X0 X4 X1) \wedge ((r1_jordan6 X0 X1 X2) \wedge (r1_jordan6 X0 X2 X3))))))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (\\
& (r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \tag{9}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{10}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X4.(v1_xreal_0 X4)\Rightarrow(\forall X5.(v1_xreal_0 X5)\Rightarrow(\forall X6. \\ & (v1_xreal_0 X6)\Rightarrow(\forall X7.(v1_xreal_0 X7)\Rightarrow(((k18_euclid X0 = \\ & X7)\wedge((k17_euclid X1 = X5)\wedge(k17_euclid X2 = X5)\wedge(k18_euclid X3 = \\ & X6)\wedge((r1_xxreal_0 X4 (k17_euclid X0))\wedge((r1_xxreal_0 (k17_euclid \\ & X0) X5)\wedge((r1_xxreal_0 (k18_euclid X1) X7)\wedge((r1_xxreal_0 X6 (k18_euclid \\ & X2))\wedge(r1_xxreal_0 (k17_euclid X3) X5))))))))))\Rightarrow((r1_xxreal_0 \\ & X5 X4)\vee((r1_xxreal_0 X7 X6)\vee((r1_xxreal_0 (k18_euclid X1) (k18_euclid \\ & X2))\vee((r1_xxreal_0 (k17_euclid X3) X4)\vee(r1_jordan17 (k1_sppol_2 \\ & X4 X5 X6 X7) X0 X1 X2 X3)))))))))) \end{aligned}$$