

## t4\_jgraph\_7

(TMJ3MU6Uf8FVG8Qx7oHF45i7yXWZj3o4c7n)

October 27, 2020

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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k18\_euclid : \iota \Rightarrow \iota$  be given. Let  $k17\_euclid : \iota \Rightarrow \iota$  be given. Let  $r1\_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_sppol\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\
 & (v1\_xreal\_0 X2) \Rightarrow (\forall X3.(v1\_xreal\_0 X3) \Rightarrow (\forall X4.(m1\_subset\_1 \\
 & X4 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (\forall X5.(m1\_subset\_1 \\
 & X5 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow ((X4 \in k1\_rltopsp1 (k15\_euclid \\
 & np\_2) (k19\_euclid X0 X2) (k19\_euclid X0 X3)) \Rightarrow ((r1\_xxreal\_0 X1 \\
 & X0) \vee ((r1\_xxreal\_0 X3 X2) \vee ((r1\_jordan6 (k1\_sppol\_2 X0 X1 X2 X3) \\
 & X4 X5) \Leftrightarrow (\neg(\neg(X5 \in k1\_rltopsp1 (k15\_euclid np\_2) (k19\_euclid X0 \\
 & X2) (k19\_euclid X0 X3)) \wedge (r1\_xxreal\_0 (k18\_euclid X4) (k18\_euclid \\
 & X5)))) \wedge (\neg X5 \in k1\_rltopsp1 (k15\_euclid np\_2) (k19\_euclid X0 X3) \\
 & (k19\_euclid X1 X3)) \wedge (\neg X5 \in k1\_rltopsp1 (k15\_euclid np\_2) (k19\_euclid \\
 & X1 X3) (k19\_euclid X1 X2)) \wedge (\neg(X5 \in k1\_rltopsp1 (k15\_euclid np\_2) \\
 & (k19\_euclid X1 X2) (k19\_euclid X0 X2)) \wedge (X5 \neq k18\_pscomp\_1 (k1\_sppol\_2 \\
 & X0 X1 X2 X3))))))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\
 & (v1\_xreal\_0 X2) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid \\
 & np\_2))) \Rightarrow (((k17\_euclid X3 = X0) \wedge ((r1\_xxreal\_0 X1 (k18\_euclid \\
 & X3)) \wedge (r1\_xxreal\_0 (k18\_euclid X3) X2))) \Rightarrow ((r1\_xxreal\_0 X2 X1) \vee \\
 & (X3 \in k1\_rltopsp1 (k15\_euclid np\_2) (k19\_euclid X0 X1) (k19\_euclid \\
 & X0 X2))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xreal\_0 X2) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid \\ & np\_2)))) \Rightarrow (((k18\_euclid X3 = X2) \wedge ((r1\_xxreal\_0 X0 (k17\_euclid \\ & X3)) \wedge (r1\_xxreal\_0 (k17\_euclid X3) X1))) \Rightarrow ((r1\_xxreal\_0 X1 X0) \vee \\ & (X3 \in k1\_rltopsp1 (k15\_euclid np\_2) (k19\_euclid X0 X2) (k19\_euclid \\ & X1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (m1\_subset\_1 (k18\_euclid X0) k1\_numbers) \quad (4)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (m1\_subset\_1 (k17\_euclid X0) k1\_numbers) \quad (5)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X2.(v1\_xreal\_0 X2) \Rightarrow (\forall X3.(v1\_xreal\_0 X3) \Rightarrow ((( \\ & r1\_xxreal\_0 X3 (k18\_euclid X0)) \wedge ((r1\_xxreal\_0 (k18\_euclid X0) \\ & (k18\_euclid X1)) \wedge ((r1\_xxreal\_0 (k17\_euclid X0) (k17\_euclid X1)) \wedge \\ & (r1\_xxreal\_0 (k17\_euclid X1) X2)))) \Rightarrow ((r1\_xxreal\_0 X2 (k17\_euclid \\ & X0)) \vee ((r1\_xxreal\_0 (k18\_euclid X1) X3) \vee (r1\_jordan6 (k1\_sppol\_2 \\ & (k17\_euclid X0) X2 X3 (k18\_euclid X1)) X0 X1)))))) \end{aligned}$$