

# t103\_jordan2c (TMYLAAsxuNJKhE- FXfEtva9QLukcZaysNUtH)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k14\_euclid : \iota \Rightarrow \iota$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $k9\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k12\_euclid : \iota \Rightarrow \iota$  be given. Let  $k5\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 (k14\_euclid X0))) \Rightarrow (\forall X2.( \\ & m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (\forall X3.(v1\_xreal\_0 \\ X3) \Rightarrow ((X2 = X1) \Rightarrow (k9\_metric\_1 (k14\_euclid X0) X1 X3 = ReplSep (toset \\ & (\lambda X4 : \iota.m1\_subset\_1 X4 (u1\_struct\_0 (k15\_euclid X0)))) (\lambda X4 : \iota.\neg r1\_xxreal\_0 X3 (k12\_euclid (k5\_algstr\_0 (k15\_euclid \\ & X0) X2 X4))) (\lambda X4 : \iota.X4)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (\forall X2.( \\ & m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (k12\_euclid (k5\_algstr\_0 \\ & (k15\_euclid X0) X1 X2) = k12\_euclid (k5\_algstr\_0 (k15\_euclid X0) \\ & X2 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \tag{3}$$

## Theorem 1

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 k1\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & (k14\_euclid X0))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 ( \\ & k15\_euclid X0))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 (k15\_euclid \\ & X0))) \Rightarrow (((X3 = X2) \wedge (X4 \in k9\_metric\_1 (k14\_euclid X0) X2 X1)) \Rightarrow ((\neg \\ & r1\_xxreal\_0 X1 (k12\_euclid (k5\_algstr\_0 (k15\_euclid X0) X3 X4))) \wedge \\ & (\neg r1\_xxreal\_0 X1 (k12\_euclid (k5\_algstr\_0 (k15\_euclid X0) X4 X3)))))))))) \end{aligned}$$