

# l5\_metric\_1 (TMN- bGvs43hAzZ41JngFxGGq6QB3A6xfZMFq)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_funct\_5 : \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k7\_funct\_5 : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k12\_arytm\_3 : \iota$  be given. Let  $k1\_arytm\_3 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k5\_arytm\_3 : \iota$  be given. Let  $c1\_xreal\_0 : \iota$  be given. Assume the following.

$$np\_1 = k1\_tarski\ k1\_xboole\_0 \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (r1\_xreal\_0\ X0\ (k2\_xcmplx\_0\ X0\ X1))) \tag{3}$$

Assume the following.

$$k9\_funct\_5 = k7\_funct\_5 \tag{4}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{5}$$

Assume the following.

$$k12\_arytm\_3 = k1\_arytm\_3 \tag{6}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1\ X0\ np\_1) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ np\_1) \Rightarrow ((k5\_binop\_1\ np\_1\ k9\_funct\_5\ X0\ X1 = k6\_numbers) \Leftrightarrow (X0 = X1))) \end{aligned} \tag{7}$$

Assume the following.

$$v1\_xboole\_0 \ k1\_xboole\_0 \tag{8}$$

Assume the following.

$$(\neg v1\_xboole\_0 \ k12\_arytm\_3) \wedge ((v3\_ordinal1 \ k12\_arytm\_3) \wedge (m1\_subset\_1 \ k12\_arytm\_3 \ k5\_arytm\_3)) \tag{9}$$

Assume the following.

$$c1\_xreal\_0 = k6\_numbers \tag{10}$$

Assume the following.

$$k1\_xboole\_0 = the \ (\lambda X0 : \iota.v1\_xboole\_0 \ X0) \tag{11}$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1\_tarski \ X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \tag{12}$$

Assume the following.

$$k1\_arytm\_3 = np\_1 \tag{13}$$

Assume the following.

$$\forall X0. (v1\_xboole\_0 \ X0) \Rightarrow (v7\_ordinal1 \ X0) \tag{14}$$

**Theorem 1**

$$\forall X0. (m1\_subset\_1 \ X0 \ np\_1) \Rightarrow (\forall X1. (m1\_subset\_1 \ X1 \ np\_1) \Rightarrow (\forall X2. (m1\_subset\_1 \ X2 \ np\_1) \Rightarrow (r1\_xreal\_0 \ (k5\_binop\_1 \ np\_1 \ k9\_funct\_5 \ X0 \ X2) \ (k2\_xcmplx\_0 \ (k5\_binop\_1 \ np\_1 \ k9\_funct\_5 \ X0 \ X1) \ (k5\_binop\_1 \ np\_1 \ k9\_funct\_5 \ X1 \ X2))))))$$