

t11\_topmetr  
(TMJ3d2QKZKKhddQM4Pf5tsgRUuWJUcwEcgr)

October 27, 2020

Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k8\_metric\_1 : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k4\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v8\_metric\_1 : \iota \Rightarrow o$  be given. Let  $l1\_metric\_1 : \iota \Rightarrow o$  be given. Let  $k2\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $g1\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v6\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v7\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v9\_metric\_1 : \iota \Rightarrow o$  be given. Let  $k7\_metric\_1 : \iota$  be given. Let  $k1\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_metric\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k9\_real\_1 X0 X1 = k6\_xcmplx\_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((v8\_metric\_1 X0) \wedge (l1\_metric\_1 X0)) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow (k4\_metric\_1 X0 X1 X2 = k2\_metric\_1 X0 X1 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) k1\_numbers)))) \Rightarrow (\forall X2. \forall X3. (g1\_metric\_1 X0 X1 = g1\_metric\_1 X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \quad (3)$$

Assume the following.

$$(v1\_metric\_1 k8\_metric\_1) \wedge ((v6\_metric\_1 k8\_metric\_1) \wedge ((v7\_metric\_1 k8\_metric\_1) \wedge ((v8\_metric\_1 k8\_metric\_1) \wedge (v9\_metric\_1 k8\_metric\_1)))) \quad (4)$$

Assume the following.

$$(v1\_metric\_1 \ k8\_metric\_1) \wedge (l1\_metric\_1 \ k8\_metric\_1) \quad (5)$$

Assume the following.

$$(v1\_funct\_1 \ k7\_metric\_1) \wedge ((v1\_funct\_2 \ k7\_metric\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers) \ k1\_numbers) \wedge (m1\_subset\_1 \ k7\_metric\_1 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers) \ k1\_numbers)))) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1\_metric\_1 \ X0) \Rightarrow (\forall X1. (m1\_subset\_1 \ X1 \ (u1\_struct\_0 \ X0)) \Rightarrow (\forall X2. (m1\_subset\_1 \ X2 \ (u1\_struct\_0 \ X0)) \Rightarrow (k2\_metric\_1 \ X0 \ X1 \ X2 = k1\_metric\_1 \ (u1\_struct\_0 \ X0) \ (u1\_struct\_0 \ X0) \ (u1\_metric\_1 \ X0) \ X1 \ X2))) \end{aligned} \quad (7)$$

Assume the following.

$$k8\_metric\_1 = g1\_metric\_1 \ k1\_numbers \ k7\_metric\_1 \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1\_funct\_1 \ X0) \wedge ((v1\_funct\_2 \ X0 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers) \ k1\_numbers) \wedge (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers) \ k1\_numbers)))))) \Rightarrow ((X0 = k7\_metric\_1) \Leftrightarrow (\forall X1. (m1\_subset\_1 \ X1 \ k1\_numbers) \Rightarrow (\forall X2. (m1\_subset\_1 \ X2 \ k1\_numbers) \Rightarrow (k1\_metric\_1 \ k1\_numbers \ k1\_numbers \ X0 \ X1 \ X2 = k18\_complex1 \ (k9\_real\_1 \ X1 \ X2)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (l1\_metric\_1 \ X0) \Rightarrow ((v1\_metric\_1 \ X0) \Rightarrow (X0 = g1\_metric\_1 \ (u1\_struct\_0 \ X0) \ (u1\_metric\_1 \ X0))) \quad (10)$$

**Theorem 1**

$$\begin{aligned} \forall X0. (m1\_subset\_1 \ X0 \ (u1\_struct\_0 \ k8\_metric\_1)) \Rightarrow (\forall X1. (m1\_subset\_1 \ X1 \ (u1\_struct\_0 \ k8\_metric\_1)) \Rightarrow (\forall X2. (v1\_xreal\_0 \ X2) \Rightarrow (\forall X3. (v1\_xreal\_0 \ X3) \Rightarrow (((X2 = X0) \wedge (X3 = X1)) \Rightarrow (k4\_metric\_1 \ k8\_metric\_1 \ X0 \ X1 = k18\_complex1 \ (k6\_xcmplx\_0 \ X2 \ X3)))))) \end{aligned}$$