

## t24\_metric\_2

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v6\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v8\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v9\_metric\_1 : \iota \Rightarrow o$  be given. Let  $l1\_metric\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_metric\_2 : \iota \Rightarrow \iota$  be given. Let  $k4\_metric\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r4\_metric\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_metric\_1 X0)) \Rightarrow (\forall X1. \\
 & (m1\_subset\_1 X1 k1\_numbers) \Rightarrow (k4\_metric\_2 X0 X1 = ReplSep (toset \\
 & (\lambda X2 : \iota. m1\_subset\_1 X2 (k2\_zfmisc\_1 (k2\_metric\_2 X0) (k2\_metric\_2 \\
 & X0)))) (\lambda X2 : \iota. \exists X3. (m1\_subset\_1 X3 (k2\_metric\_2 X0)) \wedge \\
 & (\exists X4. (m1\_subset\_1 X4 (k2\_metric\_2 X0)) \wedge ((X2 = k1\_domain\_1 \\
 & (k2\_metric\_2 X0) (k2\_metric\_2 X0) X3 X4) \wedge (r4\_metric\_2 X0 X3 X4 X1)))) \\
 & (\lambda X2 : \iota. X2)))
 \end{aligned} \tag{1}$$

### Theorem 1

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v6\_metric\_1 X0) \wedge ((v8\_metric\_1 \\
 & X0) \wedge ((v9\_metric\_1 X0) \wedge (l1\_metric\_1 X0)))))) \Rightarrow (\forall X1. (m1\_subset\_1 \\
 & X1 k1\_numbers) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k2\_zfmisc\_1 (k2\_metric\_2 \\
 & X0) (k2\_metric\_2 X0)) \Rightarrow ((X2 \in k4\_metric\_2 X0 X1) \Leftrightarrow (\exists X3. ( \\
 & m1\_subset\_1 X3 (k2\_metric\_2 X0)) \wedge (\exists X4. (m1\_subset\_1 X4 \\
 & (k2\_metric\_2 X0)) \wedge ((X2 = k1\_domain\_1 (k2\_metric\_2 X0) (k2\_metric\_2 \\
 & X0) X3 X4) \wedge (r4\_metric\_2 X0 X3 X4 X1)))))))
 \end{aligned}$$