

t31\_roughs\_1  
(TMKRG49pxSjj3gzx1pzJweK1MbBY1nJQ5qE)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v3\_roughs\_1 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_roughs\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_roughs\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_roughs\_1 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \Rightarrow (k4\_roughs\_1 X0 (k3\_roughs\_1 X0 (k4\_roughs\_1 X0 X1)) = k4\_roughs\_1 \\ X0 X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_roughs\_1 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \Rightarrow (k4\_roughs\_1 X0 (k3\_subset\_1 (u1\_struct\_0 X0) X1) = k3\_subset\_1 \\ (u1\_struct\_0 X0) (k3\_roughs\_1 X0 X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (k3\_subset\_1 \\ X0 (k3\_subset\_1 X0 X1) = X1) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1.(((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \wedge \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow (m1\_subset\_1 \\ (k4\_roughs\_1 X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (m1\_subset\_1 \\ (k3\_subset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow (m1\_subset\_1 \\ & (k3\_roughs\_1 X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \end{aligned} \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_roughs\_1 X0) \wedge (l1\_orders\_2 \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow (k3\_roughs\_1 X0 (k4\_roughs\_1 X0 (k3\_roughs\_1 X0 X1)) = k3\_roughs\_1 \\ & X0 X1)) \end{aligned}$$