

# t19\_twoscomp (TMFuE- SpYs5cpfUg3SQYnhW7XPYqYgtMD9Hf)

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Let  $k1\_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_twoscomp : \iota$  be given. Let  $k11\_finseq.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_xboole.0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole.0 : \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $k3\_xcmplx.0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx.0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_margrel1 : \iota$  be given. Let  $k9\_margrel1 : \iota \Rightarrow \iota$  be given. Let  $k3\_xboolean : \iota \Rightarrow \iota$  be given. Let  $k8\_margrel1 : \iota$  be given. Let  $k2\_xboolean : \iota$  be given. Let  $k7\_margrel1 : \iota$  be given. Let  $k1\_xboolean : \iota$  be given. Let  $k10\_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboolean : \iota \Rightarrow o$  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  $k4\_finseq.2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $k1\_zfmisc.1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xboole.0 X0) \Rightarrow (X0 = k1\_xboole.0) \quad (1)$$

Assume the following.

$$v1\_xboole.0 np\_0 \quad (2)$$

Assume the following.

$$k3\_xcmplx.0 np\_0 np\_1 = np\_0 \quad (3)$$

Assume the following.

$$k6\_xcmplx.0 np\_1 np\_1 = np\_0 \quad (4)$$

Assume the following.

$$k6\_xcmplx.0 np\_1 np\_0 = np\_1 \quad (5)$$

Assume the following.

$$\forall X0.(m1\_subset.1 X0 k6\_margrel1) \Rightarrow (k9\_margrel1 X0 = k3\_xboolean X0) \quad (6)$$

Assume the following.

$$k8\_margrel1 = k2\_xboolean \quad (7)$$

Assume the following.

$$k7\_margrel1 = k1\_xboolean \quad (8)$$

Assume the following.

$$k6\_numbers = k1\_xboole_0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k6\_margrel1)\wedge(m1\_subset\_1 X1 k6\_margrel1))\Rightarrow(k10\_margrel1 X0 X1 = k4\_xboolean X0 X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xboolean X0)\wedge(v1\_xboolean X1))\Rightarrow(k4\_xboolean X0 X0 = X0) \quad (11)$$

Assume the following.

$$v1\_xboolean k2\_xboolean \quad (12)$$

Assume the following.

$$v1\_xboolean k1\_xboolean \quad (13)$$

Assume the following.

$$m1\_subset\_1 k8\_margrel1 k6\_margrel1 \quad (14)$$

Assume the following.

$$m1\_subset\_1 k7\_margrel1 k6\_margrel1 \quad (15)$$

Assume the following.

$$(v1\_funct\_1 k18\_twoscomp)\wedge((v1\_funct\_2 k18\_twoscomp (k4\_finseq\_2 np\_3 k6\_margrel1) k6\_margrel1)\wedge(m1\_subset\_1 k18\_twoscomp (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k4\_finseq\_2 np\_3 k6\_margrel1) k6\_margrel1)))) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_xboolean X0)\Rightarrow(\forall X1.(v1\_xboolean X1)\Rightarrow(k4\_xboolean X0 X1 = k3\_xcmplx_0 X0 X1)) \quad (17)$$

Assume the following.

$$\forall X0.(v1\_xboolean X0)\Rightarrow(k3\_xboolean X0 = k6\_xcmplx_0 np\_1 X0) \quad (18)$$

Assume the following.

$$k2\_xboolean = np\_1 \quad (19)$$

Assume the following.

$$k1\_xboolean = k6\_numbers \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 (k4\_finseq\_2 np\_3 \\ & k6\_margrel1) k6\_margrel1) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k4\_finseq\_2 np\_3 k6\_margrel1) k6\_margrel1)))))) \Rightarrow ((X0 = k18\_twoscomp) \Leftrightarrow \\ & (\forall X1.(m1\_subset\_1 X1 k6\_margrel1) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 k6\_margrel1) \Rightarrow (\forall X3.(m1\_subset\_1 X3 k6\_margrel1) \Rightarrow (k1\_funct\_1 \\ & X0 (k11\_finseq\_1 X1 X2 X3) = k10\_margrel1 (k10\_margrel1 (k9\_margrel1 \\ & X1) X2) X3)))))) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_xboolean X0) \wedge (v1\_xboolean X1)) \Rightarrow ( \\ & k4\_xboolean X0 X1 = k4\_xboolean X1 X0) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1\_subset\_1 X0 k6\_margrel1) \wedge (m1\_subset\_1 \\ & X1 k6\_margrel1)) \Rightarrow (k10\_margrel1 X0 X1 = k10\_margrel1 X1 X0) \end{aligned} \quad (23)$$

### Theorem 1

$$\begin{aligned} & (k1\_funct\_1 k18\_twoscomp (k11\_finseq\_1 k6\_numbers k6\_numbers \\ & k6\_numbers) = k6\_numbers) \wedge ((k1\_funct\_1 k18\_twoscomp (k11\_finseq\_1 \\ & k6\_numbers k6\_numbers np\_1) = k6\_numbers) \wedge ((k1\_funct\_1 k18\_twoscomp \\ & (k11\_finseq\_1 k6\_numbers np\_1 k6\_numbers) = k6\_numbers) \wedge ((k1\_funct\_1 \\ & k18\_twoscomp (k11\_finseq\_1 k6\_numbers np\_1 np\_1) = np\_1) \wedge ( \\ & (k1\_funct\_1 k18\_twoscomp (k11\_finseq\_1 np\_1 k6\_numbers k6\_numbers) = \\ & k6\_numbers) \wedge ((k1\_funct\_1 k18\_twoscomp (k11\_finseq\_1 np\_1 k6\_numbers \\ & np\_1) = k6\_numbers) \wedge ((k1\_funct\_1 k18\_twoscomp (k11\_finseq\_1 \\ & np\_1 np\_1 k6\_numbers) = k6\_numbers) \wedge (k1\_funct\_1 k18\_twoscomp \\ & (k11\_finseq\_1 np\_1 np\_1 np\_1) = k6\_numbers)))))) \end{aligned}$$