

# t20\_twoscomp

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Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_twoscomp : \iota$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_margrel1 : \iota$  be given. Let  $k17\_twoscomp : \iota$  be given. Let  $k10\_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_twoscomp : \iota$  be given. Let  $k9\_margrel1 : \iota \Rightarrow \iota$  be given. Let  $k20\_twoscomp : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $k3\_xboolean : \iota \Rightarrow \iota$  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  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboolean : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k6\_margrel1) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k6\_margrel1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k6\_margrel1) \Rightarrow (( \\ & k1\_funct\_1 k17\_twoscomp (k11\_finseq\_1 X0 X1 X2) = k10\_margrel1 \\ & (k10\_margrel1 X0 X1) X2) \wedge ((k1\_funct\_1 k18\_twoscomp (k11\_finseq\_1 \\ & X0 X1 X2) = k10\_margrel1 (k10\_margrel1 (k9\_margrel1 X0) X1) X2) \wedge \\ & ((k1\_funct\_1 k19\_twoscomp (k11\_finseq\_1 X0 X1 X2) = k10\_margrel1 \\ & (k10\_margrel1 (k9\_margrel1 X0) (k9\_margrel1 X1)) X2) \wedge (k1\_funct\_1 \\ & k20\_twoscomp (k11\_finseq\_1 X0 X1 X2) = k10\_margrel1 (k10\_margrel1 \\ & (k9\_margrel1 X0) (k9\_margrel1 X1)) (k9\_margrel1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$v1\_xboole\_0 np\_0 \tag{2}$$

Assume the following.

$$k3\_xcmplx\_0 np\_0 np\_1 = np\_0 \tag{3}$$

Assume the following.

$$k6\_xcmplx\_0 np\_1 np\_1 = np\_0 \tag{4}$$

Assume the following.

$$k6\_xcmplx\_0 np\_1 np\_0 = np\_1 \tag{5}$$

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.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xboolean X0) \wedge (v1\_xboolean X1)) \Rightarrow (k4\_xboolean X0 X0 = X0) \quad (12)$$

Assume the following.

$$v1\_xboolean k2\_xboolean \quad (13)$$

Assume the following.

$$v1\_xboolean k1\_xboolean \quad (14)$$

Assume the following.

$$m1\_subset\_1 k8\_margrel1 k6\_margrel1 \quad (15)$$

Assume the following.

$$m1\_subset\_1 k7\_margrel1 k6\_margrel1 \quad (16)$$

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.

$$\forall X0.\forall X1.((v1\_xboolean X0)\wedge(v1\_xboolean X1))\Rightarrow( \quad (21)$$

$$k4\_xboolean X0 X1 = k4\_xboolean X1 X0)$$

**Theorem 1**

$$(k1\_funct\_1 k19\_twoscomp (k11\_finseq\_1 k6\_numbers k6\_numbers$$

$$k6\_numbers) = k6\_numbers)\wedge((k1\_funct\_1 k19\_twoscomp (k11\_finseq\_1$$

$$k6\_numbers k6\_numbers np\_1) = np\_1)\wedge((k1\_funct\_1 k19\_twoscomp$$

$$(k11\_finseq\_1 k6\_numbers np\_1 k6\_numbers) = k6\_numbers)\wedge((k1\_funct\_1$$

$$k19\_twoscomp (k11\_finseq\_1 k6\_numbers np\_1 np\_1) = k6\_numbers)\wedge$$

$$((k1\_funct\_1 k19\_twoscomp (k11\_finseq\_1 np\_1 k6\_numbers k6\_numbers) =$$

$$k6\_numbers)\wedge((k1\_funct\_1 k19\_twoscomp (k11\_finseq\_1 np\_1 k6\_numbers$$

$$np\_1) = k6\_numbers)\wedge((k1\_funct\_1 k19\_twoscomp (k11\_finseq\_1$$

$$np\_1 np\_1 k6\_numbers) = k6\_numbers)\wedge(k1\_funct\_1 k19\_twoscomp$$

$$(k11\_finseq\_1 np\_1 np\_1 np\_1) = k6\_numbers))))))$$