

## t110\_sincos10

(TMc4K5jPSyFJMM8wFBV39g85jXBp2fGrbPL)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k10\_sincos10 : \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $np\_4 : \iota$  be given. Let  $k32\_sin\_cos : \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_fdiff\_9 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k6\_sin\_cos9 : \iota \Rightarrow \iota$  be given. Let  $k2\_sin\_cos9 : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k30\_sin\_cos : \iota$  be given. Let  $k2\_sin\_cos4 : \iota \Rightarrow \iota$  be given. Let  $k31\_sin\_cos : \iota$  be given. Let  $k6\_sincos10 : \iota \Rightarrow \iota$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_sincos10 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow & ((r1\_xxreal\_0 (k1\_real\_1 \\ (k7\_square\_1 np\_2)) X0) \wedge & (r1\_xxreal\_0 X0 (k1\_real\_1 np\_1))) \Rightarrow \\ (k1\_seq\_1 k1\_fdiff\_9 (k10\_sincos10 X0) = X0) & \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (2)$$

Assume the following.

$$\begin{aligned} (k6\_sin\_cos9 (k1\_real\_1 np\_1) = k8\_real\_1 (k10\_real\_1 np\_3 np\_4) \\ k32\_sin\_cos) \wedge (k1\_seq\_1 k2\_sin\_cos9 (k1\_real\_1 np\_1) = k8\_real\_1 \\ (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} (k1\_seq\_1 k1\_fdiff\_9 k6\_numbers = np\_1) \wedge ((k1\_seq\_1 k1\_fdiff\_9 \\ (k10\_real\_1 k32\_sin\_cos np\_4) = k7\_square\_1 np\_2) \wedge ((k1\_seq\_1 \\ k1\_fdiff\_9 (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos) = \\ k1\_real\_1 (k7\_square\_1 np\_2)) \wedge (k1\_seq\_1 k1\_fdiff\_9 k32\_sin\_cos = \\ k1\_real\_1 np\_1))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} & (k1\_seq\_1 k30\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_4) = np\_1) \wedge \\ & ((k2\_sin\_cos4 (k10\_real\_1 k32\_sin\_cos np\_4) = np\_1) \wedge ((k1\_seq\_1 \\ & k30\_sin\_cos (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos) = \\ & k1\_real\_1 np\_1) \wedge (k2\_sin\_cos4 (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) \\ & k32\_sin\_cos) = k1\_real\_1 np\_1))) \quad (6) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (((r1\_xxreal\_0 (k1\_real\_1 \\ & (k7\_square\_1 np\_2)) X0) \wedge (r1\_xxreal\_0 X0 (k1\_real\_1 np\_1))) \Rightarrow \\ & ((r1\_xxreal\_0 (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos) \\ & (k10\_sincos10 X0)) \wedge (r1\_xxreal\_0 (k10\_sincos10 X0) k32\_sin\_cos))) \quad (7) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (r1\_xxreal\_0 X0 X0) \quad (8)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (9)$$

Assume the following.

$$k32\_sin\_cos = k31\_sin\_cos \quad (10)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (k10\_sincos10 X0 = k6\_sincos10 X0) \quad (11)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0 X0) \wedge (v1\_xxreal\_0 X0) \quad (12)$$

Assume the following.

$$v3\_membered k1\_numbers \quad (13)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (m1\_subset\_1 (k6\_sin\_cos9 X0) k1\_numbers) \quad (14)$$

Assume the following.

$$v1\_xreal\_0 \ k31\_sin\_cos \quad (15)$$

Assume the following.

$$(v1\_funct\_1 \ k30\_sin\_cos) \wedge (m1\_subset\_1 \ k30\_sin\_cos \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers))) \quad (16)$$

Assume the following.

$$(v1\_funct\_1 \ k2\_sincos10) \wedge (m1\_subset\_1 \ k2\_sincos10 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers))) \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v3\_valued\_0 \ X0))) \Rightarrow (m1\_subset\_1 \ (k1\_seq\_1 \ X0 \ X1) \ k1\_numbers) \quad (18)$$

Assume the following.

$$(v1\_funct\_1 \ k1\_fdiff\_9) \wedge (m1\_subset\_1 \ k1\_fdiff\_9 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers))) \quad (19)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k1\_numbers) \Rightarrow (k6\_sincos10 \ X0 = k1\_seq\_1 \ k2\_sincos10 \ X0) \quad (20)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xxreal\_0 \ X0) \wedge (v1\_xxreal\_0 \ X1)) \Rightarrow (r1\_xxreal\_0 \ X0 \ X1) \vee (r1\_xxreal\_0 \ X1 \ X0) \quad (21)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 \ X0) \Rightarrow (v1\_xxreal\_0 \ X0) \quad (22)$$

Assume the following.

$$\forall X0. (v3\_membered \ X0) \Rightarrow (v2\_membered \ X0) \quad (23)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1))) \Rightarrow (v1\_relat\_1 \ X2) \quad (24)$$

Assume the following.

$$\forall X0. \forall X1. (v3\_membered \ X1) \Rightarrow (\forall X2. (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1))) \Rightarrow (v3\_valued\_0 \ X2)) \quad (25)$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v1\_xreal\_0\ X1)) \quad (26)$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v1\_xreal\_0\ X1)) \quad (27)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\neg(\neg r1\_xreal\_0\ X0\ (k1\_real\_1\ (k7\_square\_1\ np\_2)))\wedge((\neg r1\_xreal\_0\ (k1\_real\_1\ np\_1)\ X0)\wedge (\neg(\neg r1\_xreal\_0\ (k10\_sincos10\ X0)\ (k8\_real\_1\ (k10\_real\_1\ np\_3\ np\_4)\ k32\_sin\_cos))\wedge(\neg r1\_xreal\_0\ k32\_sin\_cos\ (k10\_sincos10\ X0))))))$$