

t103_sincos10

(TMQF341xV19XcAupFruFiVR4WaJ5DPhnDu9)

October 27, 2020

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 $k11_sincos10 : \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $np_4 : \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_fdiff_9 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow & (((r1_xxreal_0 (k1_real_1 \\ (k7_square_1 np_2)) X0) \wedge (r1_xxreal_0 X0 (k1_real_1 np_1))) \Rightarrow & \quad (1) \\ (k1_seq_1 k2_fdiff_9 (k11_sincos10 X0) = X0)) \end{aligned}$$

Assume the following.

$$\begin{aligned} (k1_seq_1 k2_fdiff_9 (k1_real_1 (k10_real_1 k32_sin_cos np_2)) = & \\ k1_real_1 np_1) \wedge ((k1_seq_1 k2_fdiff_9 (k1_real_1 (k10_real_1 & \\ k32_sin_cos np_4)) = k1_real_1 (k7_square_1 np_2)) \wedge ((k1_seq_1 & \quad (2) \\ k2_fdiff_9 (k10_real_1 k32_sin_cos np_4) = k7_square_1 np_2) \wedge \\ (k1_seq_1 k2_fdiff_9 (k10_real_1 k32_sin_cos np_2) = np_1))) \end{aligned}$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow & (((((r1_xxreal_0 (k1_real_1 \\ (k7_square_1 np_2)) X0) \wedge (r1_xxreal_0 X0 (k1_real_1 np_1)) \wedge & \\ (k11_sincos10 X0 = k1_real_1 (k10_real_1 k32_sin_cos np_2)))) \Rightarrow & \\ (X0 = k1_real_1 np_1) \wedge ((r1_xxreal_0 (k1_real_1 (k7_square_1 & \\ np_2)) X0) \wedge (r1_xxreal_0 X0 (k1_real_1 np_1)) \wedge (k11_sincos10 & \\ X0 = k1_real_1 (k10_real_1 k32_sin_cos np_4)))) \Rightarrow (X0 = k1_real_1 & \\ (k7_square_1 np_2)))) \end{aligned}$$