

# t54\_pepin (TM- REgkYS8PYo4ghfSQ8ScGebZGPzmnecBVX)

October 27, 2020

Let  $k4\_pepin : \iota \Rightarrow \iota$  be given. Let  $np\_4 : \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_256 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k1\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_power : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_16 : \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $np\_8 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_65536 : \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $np\_65537 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k3\_power : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v1\_xcmplx\_0 X2) \Rightarrow (k1\_newton X2 (k2\_xcmplx\_0 X0 X1) = k3\_xcmplx\_0 \\ & (k1\_newton X2 X0) (k1\_newton X2 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$k4\_power np\_2 np\_4 = np\_16 \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_8) \wedge (m2\_subset\_1 np\_8 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_8 k5\_numbers) \wedge (m1\_subset\_1 np\_8 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_65536) \wedge (m2\_subset\_1 np\_65536 k1\_numbers \\ & k5\_numbers)) \wedge ((m1\_subset\_1 np\_65536 k5\_numbers) \wedge (m1\_subset\_1 \\ & np\_65536 k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_4) \wedge (m2\_subset\_1 np\_4 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_4 k5\_numbers) \wedge (m1\_subset\_1 np\_4 k1\_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_2) \wedge (m2\_subset\_1 \ np\_2 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_2 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_2 \ k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_256) \wedge (m2\_subset\_1 \ np\_256 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_256 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_256 \ k1\_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_16) \wedge (m2\_subset\_1 \ np\_16 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_16 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_16 \ k1\_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$k4\_xcmplx\_0 \ (k4\_xcmplx\_0 \ np\_2) = np\_2 \quad (10)$$

Assume the following.

$$k3\_xcmplx\_0 \ np\_256 \ np\_256 = np\_65536 \quad (11)$$

Assume the following.

$$k3\_xcmplx\_0 \ np\_16 \ np\_16 = np\_256 \quad (12)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_8 \ np\_8 = np\_16 \quad (13)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_65536 \ np\_1 = np\_65537 \quad (14)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_4 \ np\_4 = np\_8 \quad (15)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1\_subset\_1 \ X0 \ k1\_numbers) \wedge (m1\_subset\_1 \\ & X1 \ k1\_numbers)) \Rightarrow (k4\_power \ X0 \ X1 = k3\_power \ X0 \ X1) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(k4\_nat\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(k2\_newton X0 X1 = k1\_newton X0 X1) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(k2\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge(m1\_subset\_1 X1 k5\_numbers))\Rightarrow(k1\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v7\_ordinal1 X1))\Rightarrow(k3\_power X0 X1 = k1\_newton X0 X1) \quad (22)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0))\wedge(v1\_xreal\_0 (k4\_xcmplx\_0 X0))) \quad (23)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(k4\_pepin X0 = k1\_nat\_1 (k2\_newton np\_2 (k2\_newton np\_2 X0)) np\_1) \quad (24)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (25)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (26)$$

**Theorem 1**  $k4\_pepin np\_4 = k2\_nat\_1 (k4\_nat\_1 np\_256 np\_256) np\_1$ .