

# 195\_pepin (TMLar- wEh9G6vCUNcVyaUUU7xioapmpNAZ54)

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Let  $k4\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $np\_4 : \iota$  be given. Let  $k4\_pepin : \iota \Rightarrow \iota$  be given. Let  $np\_81 : \iota$  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  $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  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  $np\_65537 : \iota$  be given. Let  $np\_65536 : \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$k4\_pepin\ np\_4 = k2\_nat\_1\ (k4\_nat\_1\ np\_256\ np\_256)\ np\_1 \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (k7\_nat\_d\ (k2\_xcmplx\_0\ X0\ X1)\ X1 = X0)) \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow ((\neg r1\_xxreal\_0\ X1\ X0) \Rightarrow (k4\_nat\_d\ X0\ X1 = X0))) \quad (3)$$

Assume the following.

$$((v2\_xxreal\_0\ np\_81) \wedge (m2\_subset\_1\ np\_81\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_81\ k5\_numbers) \wedge (m1\_subset\_1\ np\_81\ k1\_numbers)) \quad (4)$$

Assume the following.

$$((v2\_xxreal\_0\ np\_65537) \wedge (m2\_subset\_1\ np\_65537\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_65537\ k5\_numbers) \wedge (m1\_subset\_1\ np\_65537\ k1\_numbers)) \quad (5)$$

Assume the following.

$$((v2\_xreal\_0 \text{ np\_65536}) \wedge (m2\_subset\_1 \text{ np\_65536 } k1\_numbers \text{ k5\_numbers})) \wedge ((m1\_subset\_1 \text{ np\_65536 } k5\_numbers) \wedge (m1\_subset\_1 \text{ np\_65536 } k1\_numbers)) \quad (6)$$

Assume the following.

$$((v2\_xreal\_0 \text{ np\_256}) \wedge (m2\_subset\_1 \text{ np\_256 } k1\_numbers \text{ k5\_numbers})) \wedge ((m1\_subset\_1 \text{ np\_256 } k5\_numbers) \wedge (m1\_subset\_1 \text{ np\_256 } k1\_numbers)) \quad (7)$$

Assume the following.

$$((v2\_xreal\_0 \text{ np\_1}) \wedge (m2\_subset\_1 \text{ np\_1 } k1\_numbers \text{ k5\_numbers})) \wedge ((m1\_subset\_1 \text{ np\_1 } k5\_numbers) \wedge (m1\_subset\_1 \text{ np\_1 } k1\_numbers)) \quad (8)$$

Assume the following.

$$k3\_xcmplx\_0 \text{ np\_256 } \text{ np\_256} = \text{ np\_65536} \quad (9)$$

Assume the following.

$$k2\_xcmplx\_0 \text{ np\_65536 } \text{ np\_1} = \text{ np\_65537} \quad (10)$$

Assume the following.

$$\neg r1\_xreal\_0 \text{ np\_65537 } \text{ np\_81} \quad (11)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 X0 \text{ k5\_numbers}) \wedge (v7\_ordinal1 X1)) \Rightarrow (k4\_nat\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 X0 \text{ k5\_numbers}) \wedge (v7\_ordinal1 X1)) \Rightarrow (k2\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (14)$$

Assume the following.

$$k13\_newton \text{ np\_3 } \text{ np\_4} = \text{ np\_81} \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. ((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow (v7\_ordinal1 (k2\_xcmplx\_0 X0 X1)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(m1\_subset\_1\ (k7\_nat\_d\ X0\ X1)\ k5\_numbers) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(k2\_xcmplx\_0\ X0\ X1 = k2\_xcmplx\_0\ X1\ X0) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(v7\_ordinal1\ X1))\Rightarrow(k2\_nat\_1\ X0\ X1 = k2\_nat\_1\ X1\ X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xcmplx\_0\ X0) \quad (21)$$

**Theorem 1**  $k4\_nat\_d\ (k13\_newton\ np\_3\ np\_4)\ (k4\_pepin\ np\_4) = np\_81.$