

## t14\_facirc\_1

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v11\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_msafree2 : \iota \Rightarrow o$  be given. Let  $l1\_msualg\_1 : \iota \Rightarrow o$  be given. Let  $v4\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_msafree2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_card\_3 : \iota \Rightarrow \iota$  be given. Let  $u3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_facirc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k6\_circuit2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  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  $np\_0 : \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v11\_struct\_0 X0) \wedge ((v2\_msafree2 \\ X0) \wedge (l1\_msualg\_1 X0)))) \Rightarrow (\forall X1.((v4\_msualg\_1 X1 X0) \wedge (( \\ v4\_msafree2 X1 X0) \wedge (l3\_msualg\_1 X1 X0))) \Rightarrow (\forall X2.(m1\_subset\_1 \\ X2 (k4\_card\_3 (u3\_msualg\_1 X0 X1))) \Rightarrow (\forall X3.(v7\_ordinal1 \\ X3) \Rightarrow (k5\_facirc\_1 X0 X1 X2 (k1\_nat\_1 X3 np\_1) = k6\_circuit2 X0 X1 \\ (k5\_facirc\_1 X0 X1 X2 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v11\_struct\_0 X0) \wedge ((v2\_msafree2 \\ X0) \wedge (l1\_msualg\_1 X0)))) \Rightarrow (\forall X1.((v4\_msualg\_1 X1 X0) \wedge (( \\ v4\_msafree2 X1 X0) \wedge (l3\_msualg\_1 X1 X0))) \Rightarrow (\forall X2.(m1\_subset\_1 \\ X2 (k4\_card\_3 (u3\_msualg\_1 X0 X1))) \Rightarrow (k5\_facirc\_1 X0 X1 X2 k6\_numbers = \\ X2))) \end{aligned} \quad (3)$$

Assume the following.

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

Assume the following.

$$v1\_xboole\_0 \text{ } np\_0 \tag{5}$$

Assume the following.

$$k2\_xcmplx\_0 \text{ } np\_0 \text{ } np\_1 = np\_1 \tag{6}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{7}$$

Assume the following.

$$\forall X0. \forall X1. ((v7\_ordinal1 \text{ } X0) \wedge (m1\_subset\_1 \text{ } X1 \text{ } k5\_numbers)) \Rightarrow (k1\_nat\_1 \text{ } X0 \text{ } X1 = k2\_xcmplx\_0 \text{ } X0 \text{ } X1) \tag{8}$$

Assume the following.

$$\forall X0. (v1\_xboole\_0 \text{ } X0) \Rightarrow (v7\_ordinal1 \text{ } X0) \tag{9}$$

**Theorem 1**

$$\forall X0. ((\neg v2\_struct\_0 \text{ } X0) \wedge ((\neg v11\_struct\_0 \text{ } X0) \wedge ((v2\_msafree2 \text{ } X0) \wedge (l1\_msualg\_1 \text{ } X0)))) \Rightarrow (\forall X1. ((v4\_msualg\_1 \text{ } X1 \text{ } X0) \wedge ((v4\_msafree2 \text{ } X1 \text{ } X0) \wedge (l3\_msualg\_1 \text{ } X1 \text{ } X0)))) \Rightarrow (\forall X2. (m1\_subset\_1 \text{ } X2 \text{ } (k4\_card\_3 \text{ } (u3\_msualg\_1 \text{ } X0 \text{ } X1)))) \Rightarrow (k5\_facirc\_1 \text{ } X0 \text{ } X1 \text{ } X2 \text{ } np\_1 = k6\_circuit2 \text{ } X0 \text{ } X1 \text{ } X2))$$