

## t67\_int\_1

(TMQuCr4e2UPgibetSAQQWjnA1MUDHmi3Rtk)

October 27, 2020

Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_int\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $k5\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_int\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (r1\_xxreal\_0 X0 (k1\_int\_1 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((v1\_int\_1 X0) \Rightarrow ((v1\_int\_1 (k3\_real\_1 X0 np\_1)) \wedge (v1\_int\_1 (k5\_real\_1 X0 np\_1)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((k2\_int\_1 X0 = X0) \Leftrightarrow (v1\_int\_1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2.(v1\_xreal\_0 X2) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X2)) \Rightarrow (r1\_xxreal\_0 X0 X2)))) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_int\_1 (k1\_int\_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow ((X1 = k2\_int\_1 X0) \Leftrightarrow ((r1\_xxreal\_0 X0 X1) \wedge (\neg r1\_xxreal\_0 (k3\_real\_1 X0 np\_1) X1)))) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow ((X1 = k1\_int\_1 X0) \Leftrightarrow ((r1\_xxreal\_0 X1 X0) \wedge (\neg r1\_xxreal\_0 X1 (k5\_real\_1 X0 np\_1)))) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (v1\_xreal\_0 X0) \quad (8)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow ((r1\_xxreal\_0 (k3\_real\_1 (k1\_int\_1 X0) np\_1) X1) \vee (k1\_int\_1 X1 = k1\_int\_1 X0))))$$