

# l28\_integra6 (TMRCF- PXv8JYFqiMH9gBrmJcUVme6zY7fgFK)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_integra5 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_comseq\_2 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k18\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k4\_integra5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k56\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\
& (v1\_xreal\_0 X2) \Rightarrow (\forall X3.(v1\_xreal\_0 X3) \Rightarrow (\forall X4.((v1\_funct\_1 \\
& X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))))) \Rightarrow \\
& (((r1\_xxreal\_0 X0 X1) \wedge (r1\_integra5 (k3\_integra5 X0 X1) X4) \wedge ( \\
& (v1\_comseq\_2 (k2\_partfun1 k1\_numbers k1\_numbers X4 (k3\_integra5 \\
& X0 X1))) \wedge (r1\_tarski (k3\_integra5 X0 X1) (k9\_xtuple\_0 X4)) \wedge ( \\
& X2 \in k3\_integra5 X0 X1) \wedge (X3 \in k3\_integra5 X0 X1)))))) \Rightarrow ((r1\_tarski \\
& (k3\_integra5 (k3\_xxreal\_0 X2 X3) (k4\_xxreal\_0 X2 X3)) (k9\_xtuple\_0 \\
& (k56\_valued\_1 k1\_numbers k1\_numbers X4))) \wedge ((r1\_integra5 (k3\_integra5 \\
& (k3\_xxreal\_0 X2 X3) (k4\_xxreal\_0 X2 X3)) (k56\_valued\_1 k1\_numbers \\
& k1\_numbers X4)) \wedge ((v1\_comseq\_2 (k2\_partfun1 k1\_numbers k1\_numbers \\
& (k56\_valued\_1 k1\_numbers k1\_numbers X4) (k3\_integra5 (k3\_xxreal\_0 \\
& X2 X3) (k4\_xxreal\_0 X2 X3)))) \wedge (r1\_xxreal\_0 (k18\_complex1 (k4\_integra5 \\
& X2 X3 X4) (k4\_integra5 (k3\_xxreal\_0 X2 X3) (k4\_xxreal\_0 X2 X3) ( \\
& k56\_valued\_1 k1\_numbers k1\_numbers X4))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (r1\_xxreal\_0 X0 X0) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (k3\_xxreal\_0 X0 X1 = X0)) \wedge ((\neg r1\_xxreal\_0 X0 X1) \Rightarrow (k3\_xxreal\_0 X0 X1 = X1)))) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X1 X0) \Rightarrow (k4\_xxreal\_0 X0 X1 = X0)) \wedge ((\neg r1\_xxreal\_0 X1 X0) \Rightarrow (k4\_xxreal\_0 X0 X1 = X1)))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (k4\_xxreal\_0 X0 X1 = k4\_xxreal\_0 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xreal\_0 X2) \Rightarrow (\forall X3.(v1\_xreal\_0 X3) \Rightarrow (\forall X4.((v1\_funct\_1 \\ & X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow \\ & (((r1\_xxreal\_0 X0 X1) \wedge ((r1\_xxreal\_0 X2 X3) \wedge ((r1\_integra5 (k3\_integra5 \\ & X0 X1) X4) \wedge ((v1\_comseq\_2 (k2\_partfun1 k1\_numbers k1\_numbers X4 \\ & (k3\_integra5 X0 X1))) \wedge ((r1\_tarski (k3\_integra5 X0 X1) (k9\_xtuple\_0 \\ & X4)) \wedge ((X2 \in k3\_integra5 X0 X1) \wedge (X3 \in k3\_integra5 X0 X1)))))) \Rightarrow ( \\ & r1\_xxreal\_0 (k18\_complex1 (k4\_integra5 X3 X2 X4) (k4\_integra5 \\ & X2 X3 (k56\_valued\_1 k1\_numbers k1\_numbers X4)))))) \end{aligned}$$