

42 Prove $\neg 7$: *null* .

After trying the question, scroll down to the solution.

§ This proof starts with the negation of what we want to prove.

	$7: null$	size
\Rightarrow	$\neg 7 \leq \neg null$	size axioms; 7 is an element
$=$	$1 \leq 0$	conjoin direction law
$=$	$1 \leq 0 < 1$	transitivity
$=$	$1 < 1$	irreflexivity
$=$	\perp	

So the first line is an antitheorem, hence $\neg 7: null$ is a theorem.