

existse-before^{0,22}

$\exists e < e'. P(e) \equiv_{\text{def}} \exists e: E. (e <_{\text{loc}} e') \ \& \ P(e)$

clarification:

$\text{existse-before}(es; e'; e. P(e)) \equiv_{\text{def}} \exists e: \text{es-E}(es). \text{es-locl}(es; e; e') \ \& \ P(e)$