$$
\cfrac{
  \cfrac{
    \cfrac{
      \cfrac{\overline{\neg \exists x\ A(x)}^{\,3} \quad \cfrac{\overline{A(x)}^{\,0}}{\exists x\ A(x)}}{\cfrac{\bot}{\neg A(x)}^{\,0}}
    }{\forall x\ \neg A(x)}
    \qquad
    \cfrac{
      \overline{\exists x\ A(x)}^{\,2} \quad \cfrac{\overline{A(u)}^{\,1} \quad \cfrac{\overline{\forall x\ \neg A(x)}^{\,3}}{\neg A(u)}}{\bot}^{\,1}
    }{\cfrac{\bot}{\neg \exists u\ A(u)}^{\,2}}
  }{}
}{\neg \exists x\ A(x) \leftrightarrow \forall x\ \neg A(x)}^{\,3}
$$