

CONNECT++

Attempting to prove problem from file: simple_test_2.p

Problem has matrix:

$$\begin{aligned}
 M &= \{p(X)\} \\
 &\{r(X, Y), \neg p(X), q(Y)\} \\
 &\{s(X), \neg q(b)\} \\
 &\{\neg s(X), \neg q(X)\} \\
 &\{\neg q(X), \neg r(a, X)\} \\
 &\{\neg r(a, X), q(X)\}
 \end{aligned}$$

PROOF:

$$\begin{array}{c}
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 \begin{array}{c}
 \text{Axiom} \\
 \frac{\{\}, M, [\neg s(-2), \neg q(b), \neg r(a, -4), \neg p(-5)], [q(-6)]}{(-7 \rightarrow a)} \\
 \text{Ext} \\
 \frac{\{\neg p(-5)\}, M, [\neg s(-2), \neg q(b), \neg r(a, -4)], [q(-6)]}{(-6 \rightarrow b, -5 \rightarrow a)} \\
 \text{Red} \\
 \frac{\{q(-6), \neg p(-5)\}, M, [\neg s(-2), \neg q(b), \neg r(a, -4)], []}{(-4 \rightarrow b)} \\
 \text{Ext} \\
 \frac{\{\neg r(a, -4)\}, M, [\neg s(-2), \neg q(b)], []}{(-2 \rightarrow -3)} \\
 \text{Ext}
 \end{array} \\
 \text{Axiom} \\
 \frac{\{\}, M, [\neg s(-2), \neg q(b), \neg r(a, -4)], [q(-6), \neg p(-5)]}{(-11 \rightarrow a)} \\
 \text{Ext} \\
 \text{Axiom} \\
 \frac{\{\}, M, [\neg s(-2), \neg q(b)], [\neg r(a, -4)]}{(-8 \rightarrow -10, -9 \rightarrow a)} \\
 \text{Ext} \\
 \text{Axiom} \\
 \frac{\{\}, M, [\neg s(-2)], [\neg q(b)]}{(-3 \rightarrow -8)} \\
 \text{Ext} \\
 \text{Axiom} \\
 \frac{\{\}, M, [], [\neg s(-2), \neg q(-2)]}{\epsilon, M, \epsilon, \epsilon} \\
 \text{Ext}
 \end{array} \\
 \text{Axiom} \\
 \frac{\{\}, M, [\neg q(-2), \neg r(a, -8), \neg p(-9)], [\neg s(-2), q(-10)]}{(-11 \rightarrow a)} \\
 \text{Ext} \\
 \text{Axiom} \\
 \frac{\{\}, M, [\neg q(-2), \neg r(a, -8)], [\neg s(-2), q(-10), \neg p(-9)]}{(-8 \rightarrow -10, -9 \rightarrow a)} \\
 \text{Ext} \\
 \text{Red} \\
 \frac{\{\neg p(-9)\}, M, [\neg q(-2), \neg r(a, -8)], [\neg s(-2), q(-10)]}{(-3 \rightarrow -8)} \\
 \text{Ext} \\
 \text{Axiom} \\
 \frac{\{\}, M, [\neg q(-2)], [\neg s(-2), \neg r(a, -8)]}{\{\}, M, [], [\neg s(-2), \neg q(-2)]} \\
 \text{Ext} \\
 \text{Axiom} \\
 \frac{\{\}, M, [], [\neg s(-2), \neg q(-2)]}{\{\}, M, [], [\neg s(-2), \neg q(-2)]} \\
 \text{Ext} \\
 \text{Start} \\
 \frac{\{\neg s(-2), \neg q(-2)\}, M, [], []}{\epsilon, M, \epsilon, \epsilon}
 \end{array}
 \end{array}$$