1. Consider the following logic program introduced in class:

\[
\begin{align*}
\text{add}(a, X, X). \\
\text{add}(s(U), V, s(W)) & :\text{- add}(U, V, W). \\
\text{mult}(a, X, a). \\
\text{mult}(X, a, a). \\
\text{mult}(s(U), V, W) & :\text{- mult}(U, V, Z), \text{add}(Z, V, W).
\end{align*}
\]

Show one successful SLD-derivation for the following query:

\[- \text{mult}(Y, Y, s(s(s(a))))].

a is a constant.

2. Consider the following logic program.

\[
\begin{align*}
p(a, s(a)). \\
p(s(X), s(s(Y))) & :\text{- p}(X, Y).
\end{align*}
\]

Show one successful SLD-derivation for the following query:

\[- p(s(a), s(V)), \ p(V, s(W)).

a is a constant.