$$
\begin{tikzcd}
 & 0 \arrow[r] & A^p \arrow[r, hook, "f^p"] \arrow[dl, "d_A^p"'] \arrow[d] & B^p \arrow[r, two heads, "g^p"] \arrow[dl, "d_B^p"'] \arrow[d] & C^p \arrow[r] \arrow[dl, "d_C^p"'] \arrow[d] \arrow[dl, bend left] & 0 \\
0 \arrow[r] & A^{p+1} \arrow[r, hook, "f^{p+1}"] \arrow[d, "\alpha^{p+1}"] \arrow[d, bend left] & B^{p+1} \arrow[r, two heads, "g^{p+1}"] \arrow[d, "\beta^{p+1}"] \arrow[d, bend left] & C^{p+1} \arrow[r] \arrow[d, "\gamma^{p+1}"] \arrow[d, bend left] & 0 \\
 & 0 \arrow[r] & A_1^p \arrow[r, hook, "f_1^p"] \arrow[dl, "d_{A_1}^p"'] & B_1^p \arrow[r, two heads, "g_1^p"] \arrow[dl, "d_{B_1}^p"'] & C_1^p \arrow[r] \arrow[dl, "d_{C_1}^p"'] & 0 \\
0 \arrow[r] & A_1^{p+1} \arrow[r, hook, "f_1^{p+1}"] & B_1^{p+1} \arrow[r, two heads, "g_1^{p+1}"] & C_1^{p+1} \arrow[r] & 0 &
\end{tikzcd}
$$