$$
\begin{array}{ccccccccc}
0 & \longrightarrow & A^p & \overset{f^p}{\longrightarrow} & B^p & \overset{g^p}{\longrightarrow} & C^p & \longrightarrow & 0 \\
& & \Big\downarrow d_A^p & & \Big\downarrow d_B^p & & \Big\downarrow d_C^p & & \\
0 & \longrightarrow & A^{p+1} & \overset{f^{p+1}}{\longrightarrow} & B^{p+1} & \overset{g^{p+1}}{\longrightarrow} & C^{p+1} & \longrightarrow & 0 \\
& & \Big\downarrow \alpha^{p+1},\ \alpha^p & & \Big\downarrow \beta^{p+1},\ \beta^p & & \Big\downarrow \gamma^{p+1},\ \gamma^p & & \\
0 & \longrightarrow & A_1^p & \overset{f_1^p}{\longrightarrow} & B_1^p & \overset{g_1^p}{\longrightarrow} & C_1^p & \longrightarrow & 0 \\
& & \Big\downarrow d_{A_1}^p & & \Big\downarrow d_{B_1}^p & & \Big\downarrow d_{C_1}^p & & \\
0 & \longrightarrow & A_1^{p+1} & \overset{f_1^{p+1}}{\longrightarrow} & B_1^{p+1} & \overset{g_1^{p+1}}{\longrightarrow} & C_1^{p+1} & \longrightarrow & 0
\end{array}
$$