

$$\begin{array}{ccccccc}
& & A^p \subset & f^p & B^p & g^p & C^p \\
0 & \longrightarrow & \longrightarrow & \longrightarrow & \longrightarrow & \longrightarrow & 0 \\
& & d_A^p \swarrow & | & d_B^p \swarrow & | & d_C^p \swarrow \\
& & A^{p+1} \subset & f^{p+1} & B^{p+1} & g^{p+1} & C^{p+1} \\
0 & \longrightarrow & \longrightarrow & \longrightarrow & \longrightarrow & \longrightarrow & 0 \\
& & \alpha^{p+1} \downarrow & & \beta^{p+1} \downarrow & & \gamma^{p+1} \downarrow \\
& & 0 & \longrightarrow & A_1^p \subset & f_1^p & B_1^p \subset & g_1^p & C_1^p \\
& & & & d_{A_1}^p \swarrow & & d_{B_1}^p \swarrow & & d_{C_1}^p \swarrow \\
& & & & f_1^{p+1} & & g_1^{p+1} & & \gamma^p \Downarrow \\
0 & \longrightarrow & 0
\end{array}$$

This diagram illustrates a complex of short exact sequences involving three objects \$A, B, C\$ at different levels \$p\$ and \$p+1\$. The horizontal arrows represent the connecting maps between these objects.

- Top Row:** \$0 \rightarrow A^p \subset B^p \rightarrow C^p \rightarrow 0\$. The arrow from \$A^p\$ to \$B^p\$ is \$f^p\$, and the arrow from \$B^p\$ to \$C^p\$ is \$g^p\$.
- Middle Row:** \$0 \rightarrow A^{p+1} \subset B^{p+1} \rightarrow C^{p+1} \rightarrow 0\$. The arrow from \$A^{p+1}\$ to \$B^{p+1}\$ is \$f^{p+1}\$, and the arrow from \$B^{p+1}\$ to \$C^{p+1}\$ is \$g^{p+1}\$.
- Bottom Row:** \$0 \rightarrow A_1^p \subset B_1^p \rightarrow C_1^p \rightarrow 0\$. The arrow from \$A_1^p\$ to \$B_1^p\$ is \$f_1^p\$, and the arrow from \$B_1^p\$ to \$C_1^p\$ is \$g_1^p\$.
- Vertical Arrows:** Vertical dashed arrows connect the levels \$p\$ and \$p+1\$ for each object. Specifically, \$\alpha^{p+1}\$ connects \$A^p\$ to \$A^{p+1}\$, \$\beta^{p+1}\$ connects \$B^p\$ to \$B^{p+1}\$, and \$\gamma^{p+1}\$ connects \$C^p\$ to \$C^{p+1}\$.
- Diagonal Arrows:** Diagonal arrows labeled \$d_A^p, d_B^p, d_C^p\$ point from \$A^p\$ to \$A^{p+1}\$, \$B^p\$ to \$B^{p+1}\$, and \$C^p\$ to \$C^{p+1}\$ respectively.
- Curved Arrows:** Curved dashed arrows labeled \$\alpha^p, \beta^p, \gamma^p\$ point from \$A^{p+1}\$ back to \$A^p\$, \$B^{p+1}\$ back to \$B^p\$, and \$C^{p+1}\$ back to \$C^p\$ respectively.
- Bottom Level:** \$0 \rightarrow A_1^{p+1} \subset B_1^{p+1} \rightarrow C_1^{p+1} \rightarrow 0\$. The arrow from \$A_1^{p+1}\$ to \$B_1^{p+1}\$ is \$f_1^{p+1}\$, and the arrow from \$B_1^{p+1}\$ to \$C_1^{p+1}\$ is \$g_1^{p+1}\$.