

$$\begin{array}{c}
 w=f_1(y) \\
 \Delta w=0 \\
 w_y=g_1(x)
 \end{array}
 \begin{array}{c}
 w=g_2(x) \\
 \Delta w=0 \\
 w_y=g_1(x)
 \end{array}
 =
 \begin{array}{c}
 u=0 \\
 \Delta u=0 \\
 u_y=g_1(x)
 \end{array}
 +
 \begin{array}{c}
 v=f_1(y) \\
 \Delta v=0 \\
 v_y=0
 \end{array}
 \begin{array}{c}
 u=g_2(x) \\
 \Delta u=0 \\
 u_y=g_1(x)
 \end{array}
 \begin{array}{c}
 v=0 \\
 \Delta v=0 \\
 v_y=0
 \end{array}
 \begin{array}{c}
 v=f_2(y) \\
 \Delta v=0 \\
 v_y=0
 \end{array}$$