

$$z = f(x, y) \rightarrow \left| \begin{array}{l} y = f(x) \\ y = 3x^2 \end{array} \right| \rightarrow \left| \begin{array}{l} x = f(u) \\ x = \sqrt{u} \end{array} \right| \rightarrow \left| \begin{array}{l} v = f(w) \\ v = u^2 - w^3 \end{array} \right| \rightarrow f(w)$$