

$$h = f \circ g$$

$$y = f(x)$$

$$z = g(y) = h(x)$$

$$\frac{dz}{dx} = \frac{dz}{dy} \times \frac{dy}{dx}$$

$$D(g)(y) \times D(f)(x)$$
$$D(g)(f(x)) \times D(f)(x)$$

$$f = f_1 \circ \dots \circ f_n$$

$$D(f_n)(x_{n-1}) \cdot \dots \cdot D(f_i)(x_{i-1}) \cdot D(f_1)(x_0)$$

$$f = f_1 \circ \dots \circ f_n$$

$$f_i: \mathbb{R} \rightarrow \mathbb{R}$$

$$x_i \in \mathbb{R}$$

$$D(f_n)(x_{n-1}) \cdot \dots \cdot D(f_1)(x_{i-1}) \cdot D(f_1)(x_0)$$

$$f = f_1 \circ \dots \circ f_n$$

$$f_i: \mathbb{R} \rightarrow \mathbb{R}$$

$$x_i \in \mathbb{R}$$

$$D(f_n)(x_n) \cdot \dots \cdot D(f_i)(x_{i-1}) \cdot \dots \cdot D(f_1)(x_0)$$

$$Df_i(x)$$

$$Df_i(x_i)$$

$$x_i \in \mathbb{R}^n$$

$$f_i: \mathbb{R}^n \rightarrow \mathbb{R}^3$$