

1. (b)

$$\begin{aligned} D_1 f(0,0) &= \lim_{t \rightarrow 0} \frac{f(0,0) + t(1,0) - f(0,0)}{t} \\ &= \lim_{t \rightarrow 0} \frac{f(t,0) - 0}{t} = \lim_{t \rightarrow 0} \frac{\frac{0}{t^2}}{t} \\ &= 0 \end{aligned}$$

$$\begin{aligned} D_2 f(0,0) &= \lim_{t \rightarrow 0} \frac{f(0,0) + t(0,1) - f(0,0)}{t} \\ &= \lim_{t \rightarrow 0} \frac{f(0,t) - 0}{t} = \lim_{t \rightarrow 0} \frac{\frac{0}{t^4}}{t} \\ &= 0. \end{aligned}$$

해설가이드

- ① $D_1 f(0,0)$ 와 $D_2 f(0,0)$ 각각 5 점씩
- ② $D_1 f(p)$ 이 정의가 틀린 경우 0 점