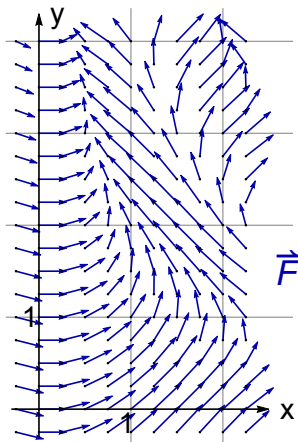## Line Integrals

Question

The figure shows a vector field $\vec{F}$ in the plane. If I_1 is the line integral of $\vec{F}$ over the curve $C_1(t, t^2)$, $1 \leq t \leq 2$, and I_2 is the line integral of $\vec{F}$ over the curve $C_2(t^2, t^4)$, $1 \leq t \leq \sqrt{2}$, rank the values of I_1 and I_2.

A. $I_1 = I_2$ B. $I_1 < I_2$ C. $I_1 > I_2$

D. There is not enough information.