Green's Theorem

Question

The field $\vec{F} = \dfrac{-y\vec{i} + x\vec{j}}{x^2 + y^2}$ satisfies $\dfrac{\partial Q}{\partial x} = \dfrac{\partial P}{\partial y}$ throughout its domain.

True or False: $\displaystyle\int_{C_1} \vec{F} \cdot d\vec{r} = \int_{C_2} \vec{F} \cdot d\vec{r}$?

A. True, and I am confident
B. True, but I am not confident.
C. False, but I am not confident.
D. False, and I am confident.