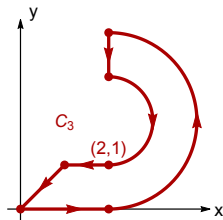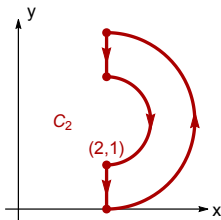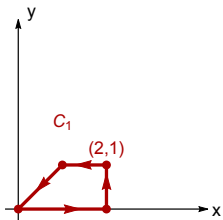# Green's Theorem

Question

The figures show 3 curves in the plane. If L is the line segment from $(2,0)$ to $(2,1)$, which of the formulas computes $\int_{C_3} \vec{F} \cdot d\vec{r}$?

A. $\int_{C_1} \vec{F} \cdot d\vec{r} + \int_{C_2} \vec{F} \cdot d\vec{r}$

B. $\int_{C_1} \vec{F} \cdot d\vec{r} + \int_{C_2} \vec{F} \cdot d\vec{r} + \int_L \vec{F} \cdot d\vec{r}$

C. $\int_{C_1} \vec{F} \cdot d\vec{r} + \int_{C_2} \vec{F} \cdot d\vec{r} + 2\int_L \vec{F} \cdot d\vec{r}$

D. There is not enough enough information.