A. Find $\int_C \mathbf{F} \cdot d\mathbf{r}$, where $\mathbf{F} = \langle -y^3, x^3 \rangle$ and C is the unit circle (counterclockwise).

B. (§13.5, 21) Find a formula for.0 the area of a polygon with given vertices.

C. Compute $\int_C \mathbf{F} \cdot d\mathbf{r}$, where $\mathbf{F} = \langle x, x^3 + 3xy^2 \rangle$ and C goes $(-2, 0)$ to $(2, 0)$ and then back along the curve $y = \sqrt{4 - x^2}$.

D. Compute $\int_C \mathbf{F} \cdot d\mathbf{r}$, where $\mathbf{F} = \langle x(x + y), xy^2 \rangle$, and C is the path $(0, 0)$ to $(1, 0)$ to $(0, 1)$.

E. Compute $\int_C x \, dy$, where C is the polar curve $r = e^\theta$.