$\mathbf{F}(x, y) = \langle e^{2x} + x^2 y, e^{2y} - xy^2 \rangle$ and the region D enclosed by C is the disk $x^2 + y^2 \leq 9$. C is traversed clockwise, so $-C$ gives the positive orientation.

$$\begin{aligned}
\int_C \mathbf{F} \cdot d\,\mathbf{r} &= -\int_{-C} (e^{2x} + x^2 y)\,dx + (e^{2y} - xy^2)\,dy \\
&= -\iint_D \left[\frac{\partial}{\partial x}\,(e^{2y} - xy^2) - \frac{\partial}{\partial y}\,(e^{2x} + x^2 y) \right] dA \\
&= -\iint_D (-y^2 - x^2)\,dA = \iint_D (x^2 + y^2)\,dA \\
&= \int_0^{2\pi} \int_0^3 (r^2)\,r\,dr\,d\theta = \int_0^{2\pi} d\theta \, \int_0^3 r^3\,dr \\
&= 2\pi \left[\tfrac{1}{4} r^4 \right]_0^3 = \tfrac{81}{2}\pi
\end{aligned}$$