10) $\int_L \vec{F} \cdot d\alpha$

$F(\gamma(t)) = (t^2 - 2t^3, t^4 - 2t^3)$

sia $\alpha = t$

$\gamma(t) = (t, t^2)$

$\frac{\gamma(t)}{dt} \cdot dt = (1, 2t)$

so: $\int_{-2}^{1} \vec{F} \cdot \frac{\gamma(t)}{dt} \, dt = -\frac{369}{10}$