Q1) Show that the integral is independent of path. Hence evaluate it on any path not passing through origin.

\[ \int_{(1,1)}^{(4,2)} \frac{-ydx + xdy}{y^2} \]

Q2) Use Green’s theorem to write double integral over region bounded by graphs of \( y = 0, x = y^2, x = 1 - y^2 \) in the first octant. Give integral with limits but do not evaluate.

\[ \int_{c}^{3} \frac{1}{3} y^3dx + (xy + xy^2)dy \]