Mathematical Physics — PHZ 3113
Vector Integration Homework
(February 20, 2013)

Integrate (explicitly!) the force

$$\vec{F} = -x_2\,\hat{x}_1 + x_1\,\hat{x}_2 \qquad (1)$$

in anti-clockwise direction along the boundary of an equilateral triangle in the $x_1 - x_2$ plane. The triangle has a side from $(0,0)$ to $(a,0)$ on the x_1 axis and closes in the upper half of the $x_1 - x_2$ plane.