Problems: Work and Line Integrals

1. Evaluate $\quad I = \displaystyle\int_C y\,dx + (x + 2y)\,dy \quad$ where C is the curve shown.
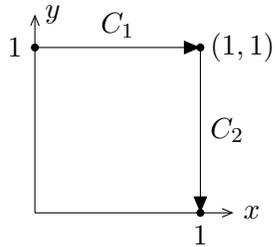

Figure 1: Curve C is C_1 followed by C_2.

2. Let $\mathbf{F} = -x\mathbf{i} - y\mathbf{j}$. Sketch this vector field and describe it in words.

18.02SC Multivariable Calculus
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