

18.022 Recitation Quiz
24 November 2014

1. Define $f : \mathbb{R}^3 \rightarrow \mathbb{R}$ by $f(x, y, z) = x^3y + \frac{xy^2}{1+z^2}$.

(a) Find $\nabla \times (\nabla f)$.

(b) Calculate $\int_C \nabla f \cdot d\mathbf{s}$, where C is the path contained in the x - y plane shown below.

