

Quiz 9, April 11

- 1 The final examination is on what date and at what time?
- 2 Find $\text{curl } \vec{F}$ and $\text{div } \vec{F}$ [that is, $\nabla \times \vec{F}$ and $\nabla \cdot \vec{F}$] when

$$\vec{F}(x, y, z) = (\sin x)\hat{i} + (\cos x)\hat{j} + z^2\hat{k}.$$

- 3 Set up an integral for the surface area of the parametric surface given by

$$\vec{r}(u, v) = v^2\hat{i} - uv\hat{j} + u^2\hat{k}, \quad 0 \leq u \leq 1, \quad 0 \leq v \leq 2.$$

(Do not attempt to evaluate the integral!)