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Mathematical Methods I — 10th Sep. '97.

Quizz

Instructor: T. Hübsch — (Student **name and ID#**)

Show that the equation $\vec{\nabla} \times (\vec{\nabla} \times \vec{A}) = k^2 \vec{A}$, where k is a constant, implies that both $\vec{\nabla} \cdot \vec{A} = 0$ and also that $\vec{\nabla}^2 \vec{A} = -k^2 \vec{A}$. (Hint: apply $\vec{\nabla}\cdot$ to the original equation.) [10pt.]

(Show all work below this line; use overleaf if necessary.)