Math 305, Quiz 6
October 31, 2007

Name:_____

(1) (5 pts) Prove that, if $\theta\colon G \to H$ is a homomorphism, then $\mathrm{Ker}(\theta)$ is a normal subgroup of G (you can assume it is a subgroup).

(2) (5 pts) Given homomorphisms $\alpha\colon G \to H$ and $\beta\colon H \to K$, show that $\mathrm{Ker}(\alpha) \subseteq \mathrm{Ker}(\beta \circ \alpha)$, but that equality need not hold.