



Honors Math 182 Quiz 3 Version A

3. Find a function  $G(x)$  such that  $G'(x) = \ln(x + 1)$ .

4. Suppose that  $f$  is continuous and  $\varphi$  is continuous with continuous derivative  $\varphi'$ .  
Prove the change of variables formula

$$\int_{\varphi(\alpha)}^{\varphi(\beta)} f(t) dt = \int_{\alpha}^{\beta} f(\varphi(t))\varphi'(t) dt.$$