

Math 104, 3rd midterm, 2008/01/21-12, O. HALD

① Show - by using ϵ - δ arguments - that the function $f(x) = x\sqrt{x}$ is continuous on $(0, \infty)$. Hint: treat $x\sqrt{x}$ as a product, or use $f(x) = \sqrt{x^3}$

① Let $\alpha = \liminf (\frac{1}{s_n})$ and $\beta = \limsup (s_n)$ with $\frac{1}{2} < s_n < 2$. Show that $\alpha \cdot \beta = 1$.