

Differential Geometry - Homework - Due Thursday, Apr. 7

1. Problem 13.2 textbook.

2. Let $U = \{(x, y, z) \in \mathbf{R}^3 \mid x > 0, y > 0, z > 0\}$, $f : U \rightarrow \mathbf{R}$, $f(x, y, z) = xyz$, and let $S = f^{-1}(1)$. Consider also the function $h(x, y, z) = xy + yz + zx$. Find the critical points of h restricted to S and determine their nature.