

Assignment-5

1. Let $\varphi: \mathbb{R}^3 \rightarrow \mathbb{R}^3$ be the map
 $\varphi((a,b,c)) = (a^l, b^m, c^n)$, here $l, m, n \geq 1$
are fixed positive integers. Compute the
pullback $\varphi^*(\omega)$, where $\omega = dx \wedge dy \wedge dz$
on \mathbb{R}^3 , x, y, z denote the usual coordinates.

(1)

2. Let $\alpha = x^2 dx + xy dy \in D^1(\mathbb{R}^2)$.
Compute $d\alpha$.

(1).