

1. Sejam

$$\omega = x dy \wedge dz - y dx \wedge dz + z dx \wedge dy$$

e

$$\eta = dx \wedge dy \wedge dz,$$

e seja

$$f(r, \theta, \varphi) = (r \cos \theta \sin \varphi, r \sin \theta \sin \varphi, r \cos \varphi).$$

Calcular $f^*\omega$ e $f^*\eta$.