

Differential Geometry - Homework 3a

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January 21, 2021

Problem 1

(a)

Determine the Hodge dual operator $*$ on all forms (expressed in spherical coordinates) by computing its action on basis forms at each rank.

$$*(1) = r^2 \sin \theta dr \wedge d\theta \wedge d\phi \tag{1}$$

$$*(dr) = \tag{2}$$