

Eastern Mediterranean University
Electrical and Electronic Engineering Department
EENG 232 Electromagnetics I
Homework 1

Date: 24.06.2019

Due:29.01.2019

- 1) Let $\vec{H} = 3\hat{a}_x + 2\hat{a}_y - 4\hat{a}_z$
 - a) Express \vec{H} in cylindrical coordinates.
 - b) Evaluate \vec{H} at $P(2, 60^\circ, -1)$.

- 2) Let $\vec{A} = \rho \cos \phi \hat{a}_\rho + \rho z^2 \sin \phi \hat{a}_z$
 - a) Transform \vec{A} into cartesian coordinates and calculate its magnitude at point $(3, -4, 0)$.
 - b) Transform \vec{A} into spherical coordinates and calculate its magnitude at point $(3, -4, 0)$.