

Homework 5
EE381-1 Electric & Magnetic Fields (Fall 2018)
Wednesday, September 26, 2018

- 1) PE3.1 modified so $4 \leq r \leq 7$ m, $30^\circ \leq \theta \leq 60^\circ$, and $40^\circ \leq \phi \leq 90^\circ$.
- 2) PE3.4
- 3) 3.6 modified so that L goes from point (1, 1) to (3, 9).
- 4) Given vector field $\bar{D} = \frac{40}{\rho^2} \sin(\phi) \hat{a}_\rho + \frac{2z}{\rho} \cos(\phi) \hat{a}_z$ (mC/m²), find the flux Ψ_D of \bar{D} through the surface S defined by $0.3 \leq \rho \leq 2$ m, $45^\circ \leq \phi \leq 120^\circ$, & $z = 3$ m.
- 5) 3.12
- 6) 3.15

Due Monday, October 1, 2018