

PHYS 313
HW 06: Assignment 6

Due on March 13th, 2025 at 11:59 PM

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March 13, 2025

Problem 3.2:

In one sentence, justify Earnshaw's Theorem.

Solution

Problem 3.3:

Find the general solution to Laplace's equation in spherical coordinates, for the case where V depends only on r . Do the same for cylindrical coordinates, assuming V depends only on s .

Solution

Problem 3.4:

1. Show that the average electric field over a spherical surface, due to charges outside the sphere, is the same as the field at the center.
2. What is the average due to charges inside the sphere?

Solution