

P142 - Fall 2014 - Problem Set 3

- ① The gravitational field \vec{g} is the force per unit mass on a test mass. For a point mass m at the origin, the gravitational field at some position \vec{r} is

$$\vec{g} = -\frac{Gm}{r^2} \hat{r}$$

For a spherical Gaussian surface surrounding mass m , determine the gravitational analog of Gauss' Law.

② 24-35

③ 24-47

④ 24-37

⑤ 24-41

⑥ 24-51

⑦ 25-1

⑧ 25-3

⑨ 25-6

⑩ 25-18

⑪ 25-28