

ASSIGNMENT

Read 15.1 up to p. 865

- p. 870 3, 9, 10, 11, 17, 46

TAKE-AWAYS

After reading this section, attending this class and doing this homework you should

- understand what a double integral is, in terms of Riemann sums
- understand that a double integral measures “signed volume”
- see how to approximate a double integral using an approximation to the Riemann sum
- know how to compute these integrals:

$$\iint_{\mathcal{R}} f(x, y) dA$$

when \mathcal{R} is any region and $f(x, y)$ is constant or when \mathcal{R} is a certain kind of region (e.g., a rectangle, a circle) and when $z = f(x, y)$ is a certain kind of surface (resp, a plane and a hemisphere).

- see that you can compute some double integrals using symmetry and geometry