

## Double Integrals over Rectangles

1. Estimate the value of

$$\int_R x + y \, dA,$$

where  $R$  is the rectangle  $[-1, 1] \times [0, 2]$  using  $n = 3, m = 2$ , and top right points.

2. Evaluate the integral

$$\int_0^1 \int_0^1 x^2 - y^3 \, dx \, dy.$$

3. Find the value of

$$\int_R \frac{x}{(1 + xy)^2} \, dA$$

where  $R$  is  $[0, 2] \times [0, 1]$ .