

## MATH 2E Prep: Double Integrals

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1. Evaluate the double integral  $\iint_D 6(x+y)^2 dS$ , where  $D$  is the region between the graphs of  $y = x$  and  $y = x^2$ .
2. Evaluate the double integral  $\int_0^1 \int_{\sqrt{x}}^1 \sqrt{y^3 + 1} dy dx$  by reversing the order of integration.