Math 241 X8 **Name(s):**

Homework 7 supplement

This is a written homework supplement to the homework for Unit 7: 2D Integrals.

Someone set up the following integrals, but chose a poor method to do it. By interpreting the integrals as integrals over a region, change methods to one requiring least effort from you. Then compute the integrals. (Remember $\cos^2 t = \frac{1}{2}(1 + \cos(2t))$ and $\sin^2 t = \frac{1}{2}(1 - \cos(2t))$.)

(1) $\displaystyle\int_0^2 \int_y^2 e^{x^2}\, dx\, dy$

(2) $\displaystyle\int_{-3}^{3} \int_{-\sqrt{9-x^2}}^{\sqrt{9-x^2}} y^2\, dy\, dx$