

HW 6
Math 261, F17

Please see the course syllabus for details on how to turn in your homework assignments. This one is due at the beginning of your class on **Friday, October 20**.

1. Suppose we wish to integrate $f(x, y) = 3x^2 - xy + 3$ over the rectangle given by $0 \leq x \leq 2$, $1 \leq y \leq 5$. Set up this integral using the variable order $dx dy$ but do not compute the answer.
2. Now compute the answer to the previous problem.
3. Repeat problem 1 using variable order $dy dx$.
4. Compute the answer to problem 3.
5. Suppose we wish to integrate some function $g(x, y)$ over the triangle with vertices $(0, 0)$, $(0, 2)$, and $(1, 2)$. Set up this integral using the variable order $dx dy$. (Do not compute the answer.)
6. Repeat the previous problem using variable order $dy dx$. (Again, do not compute the answer.)