

MA205

Board Sheet - 27 September 2007, Iterated Integrals

Step by Step Iterated Integrals

1. Create a 3D plot of the surface over the region
2. Draw and label the region
3. Choose the order of integration
4. Compute/Evaluate the "inside" integral
5. Compute/Evaluate the "outside" integral
6. Does the answer make sense?

Some Board Problems

1. $\int_0^4 \frac{y}{x+2} dy$
2. $\int_2^4 \int_{-1}^1 (x^2 + y^2) dy dx$
3. $\int_{-1}^1 \int_2^4 (x^2 + y^2) dx dy$
4. $\int_0^1 \int_1^2 \frac{x e^x}{y} dx dy$
5. $\int_0^2 \int_0^{\pi/2} x \sin y dy dx$