

<http://timmel.chem.ox.ac.uk/lectures/>

**Integration**

1. Solve problems 1-12 in the problem booklet.

2. Solve the Integral

$$\int \frac{x^4 - 4x^3 + 3x^2 - x - 5}{x^3 - 5x^2 + 11x - 15} dx$$

3. Find the value of the definite integrals:

$$\int_5^{\infty} \frac{dx}{(x-1)(x-2)}$$

$$\int_{-1/2}^1 \frac{dx}{\sqrt{2-x-x^2}}$$

$$\int_0^{\infty} x^3 e^{-x^2} dx$$