

MA1E01: Tutorial week 11

REMEMBER TO HAND BEFORE THE TUTORIAL STARTS

- Techniques of integration

Problem 1 *Compute the following integrals*

1.

$$\int \frac{\log(\log x)}{x} dx$$

2.

$$\int x^3 e^{x^2} dx$$

3.

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

Problem 2 *Compute the integral*

$$\int \sqrt{1-x^2} dx$$

And use the result to evaluate

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

Is the result what you expected?