

## Practice with Integrals

Work out the following antiderivatives. There are hints and solutions on our class website.

1.  $\int \frac{2x^2 - x + 4}{x^3 + 4x} dx$

2.  $\int e^{2\theta} \sin(3\theta) d\theta$

3.  $\int \frac{1}{y(2-y)} dy$

4.  $\int t^2 \cos(3t) dt$

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

6.  $\int x 5^x dx$

7.  $\int \frac{x-1}{x^2+1} dx$

8.  $\int \frac{1}{x\sqrt{x+1}} dx$

9.  $\int y \sinh(y) dy$

10.  $\int \frac{dx}{x^4 - x^2}$

11.  $\int \frac{t^2}{t+4} dt$

12.  $\int \cos(\ln(x)) dx$

13.  $\int \frac{x-1}{x+4} dx$

14.  $\int \tan^{-1}(x) dx$