

23 Oct, 2013
MATH 1004, Section C/D
Total marks: 40

TEST 3

1. Solve the integral [4 marks]

$$\int 2x^2 + x - 1 \, dx$$

2. Solve the integral [5 marks]

$$\int -x^3 \sqrt{4 + 9x^4} \, dx$$

3. Solve the definite integral [9 marks]

$$\int_0^{\frac{\pi}{2}} \sin^5 x \cos x \, dx$$

4. Solve the definite integral [7 marks]

$$\int_{-1}^1 \frac{x}{1+x^4} \, dx$$

5. Solve the integral [5 marks]

$$\int \frac{dx}{x \ln x}$$

6. Solve the integral by using the method of substitution **TWICE** [10 marks]

$$\int x \sin^3(x^2 + 1) \cos(x^2 + 1) \, dx$$