Name:

StudentId:

1 $let: f(x) = \int_1^x \sqrt{1+t^4}dt \quad , calculating: \quad \int_0^1 x^2 f(x)dx$

2 $calculating: \quad \int \frac{1}{x^3+1}dx$

3 $calculating: \quad \int_0^\infty 3x^{11}e^{-x^2}dx$

4 $calculating: \quad \int_{-2}^2 xln(e^x+1)dx$

5 $f'(x) = arctan(x-1)^2, f(0) = 0, calculating \quad I = \int_0^1 f(x)dx$