

積分

B. 1

微積分(II)第一次期末考總分30

2001-5-29

Problem 1 求出  $\int \frac{x^2}{\sqrt{x^3+5}} dx$ .

Problem 2 試陳述並證明分部積分法 (Integration by parts).

Problem 3 試求  $\int x^3 \ln x dx$ .

Problem 4 試求  $\int \sin^3 x dx$ .

Problem 5 試求  $\int \tan^5 x dx$ .

Problem 6 試求  $\int (\sin x + \cos 2x)^2 dx$

Problem 7 試求  $\int \frac{3x-8}{x^2-2x+1} dx$ .

Problem 8 試求  $\int \sec x dx$ .

Problem 9 試求  $\int \frac{1}{x+\sqrt{x^2+4x+3}} dx$ .

Problem 10 試用二元函數的differential 來求  $\sqrt{(4.49)^2 + (12.01)^2}$  的近似值.  
撤出