

## 習題集 2

(對應 [張旭微積分](#) 積分前篇重點二：奇偶函數的積分)

1. Find  $\int_{-1}^1 x|x| dx$ .

2. Find  $\int_{-e}^e \frac{e^x - e^{-x}}{2} dx$ .

3. Find  $\int_0^2 (x-1)^3 dx$ .

4. Find  $\int_0^{\frac{2\pi}{3}} \frac{1}{2} \sin x - \frac{\sqrt{3}}{2} \cos x dx$ .

5. Find  $\int_{-1}^1 x^3 + x^5 + x^7 + x^9 + x^{11} dx$ .

6. Find  $\int_{-1}^1 \sqrt[3]{x^3 + \frac{1}{x}} dx$ .

7. Find  $\int_{-3}^3 \sin^{-1}(\sin x) dx$ .

8. Find  $\int_{-3}^3 3 + \sin x dx$ .

9. Find  $\int_1^3 \sqrt{(x-2)^2} dx$ .

10. Find  $\int_{-2}^2 |2x| + x dx$ .