

**Calculus**  
**Classwork**

Your Name:

1. 
$$\int_1^4 \frac{x^3 + 4x - 3 \ln x}{x} dx$$

2. 
$$\int_{-\pi/4}^{\pi/4} \sin^5 y dy$$

3. 
$$\int_3^6 \frac{s^5}{\sqrt{s^3 - 1}} ds$$

$$u = s^3 - 1 \quad du = 3s^2 ds \quad u + 1 = s^3$$

$$\int_{26}^{215} \frac{u + 1}{\sqrt{u}} du = \int_{26}^{215} u^{1/2} du + \int_{26}^{215} u^{-1/2} du$$

4. 
$$\int_{-1}^2 t^5 \sin(t^3) dt$$