

Compute the following integrals

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

$$2) \int_{-\infty}^{\infty} \frac{\cos x}{x^2+9} dx$$

$$3) \int_{-\infty}^{\infty} \frac{\sin x}{x(x^2-2x+2)} dx$$

$$4) \int_0^{2\pi} \frac{d\theta}{1+\frac{1}{2}\sin\theta} d\theta$$