

In class work 5, Spring 2023

You may use your own paper to *neatly* write your answers to these questions. This assignment is due Wednesday 19 April.

1. Evaluate each principle value integral.

- 2 (a) $\int_{-\infty}^{\infty} \frac{1}{x^2+2x+2} dx$
- 2 (b) $\int_{-\infty}^{\infty} \frac{1}{x^2+2x+2} e^{iwx} dx$, where $w > 0$.
- 2 (c) $\int_{-\infty}^{\infty} \frac{1}{x^2+2x+2} e^{iwx} dx$, where $w < 0$.