

Quiz V

Exercise 1. Find the value of the integral of $g(z) = 1/(z^2 + 4)$ around the circle $|z - i| = 2$ in the positive sense.

Exercise 2. Which of the following is the Laurent series of $g(z) = \frac{\cos(z)}{z^2}$?

(a) $\frac{1}{4z} + \sum_{n=0}^{\infty} \frac{z^n}{4^{n+1}}$.

(b) $\frac{1}{z^2} + \sum_{n=0}^{\infty} (-1)^{n+1} \frac{z^{2n}}{(2n+2)!}$.

(c) $\frac{1}{z} + \sum_{n=0}^{\infty} \frac{z^{2n+1}}{(2n+3)!}$.

(d) $\sum_{n=0}^{\infty} \frac{\sqrt{z}^n}{n!}$.