

---

# Assignment 11

MA06 Complex Analysis

Deadline: 17:00, Thursday, Feb 1, 2024

---

1. Expand the given function in a Laurent series valid for the given annular domain.

(a)  $f(z) = \frac{\cos z}{z}$ ,  $0 < |z|$

(b)  $f(z) = e^{-\frac{1}{z^2}}$ ,  $0 < |z|$

2. Expand  $f(z) = \frac{1}{z(z-3)}$  in a Laurent series valid for the given annular domain.

$$0 < |z| < 3$$

3. Expand  $f(z) = \frac{1}{(z-1)(z-2)}$  in a Laurent series valid for the given annular domain.

$$1 < |z| < 2.$$

Notice:

Please write your Email title as "A{Assignment Number}-{Your Student ID}-{Your Name}".