Assignment 11

MA06 Complex Analysis Deadline 11:59 AM, 20190129

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) $f(z) = \frac{e^z}{z-1}, 0 < |z-1|$
2. Expand $f(z) = \frac{1}{(z-1)(z-2)}$ in a Laurent series valid for the given annular domain.
   (a) $1 < |z| < 2$
   (b) $|z| > 2$
3. Expand $f(z) = \frac{z}{(z+1)(z-2)}$ in a Laurent series valid for the given annular domain $0 < |z+1| < 3$.
4. Expand $f(z) = \frac{1}{z(z-2)^2}$ in a Laurent series valid for the given annular domain $0 < |z| < 1$.

Notice: Please write Your Name and Student ID when you submit.