

All curves are positively oriented unless otherwise noted.

---

1. Find a few terms of the Laurent series of the function

$$\frac{e^{1/z}}{z^2 - 1},$$

around 0, and in all different annuli where this is defined.

2. Find the Laurent series of the function

$$\frac{z + 1}{z(z - 4)^3}$$

in the annulus  $0 < |z - 4| < 4$ .