

**Problem 5.1.** Taylor 2.6.4

**Problem 5.2.** Taylor 2.6.7

**Problem 5.3.** Taylor 2.6.10

**Problem 5.4.** Taylor 2.6.13

**Problem 5.5.** Let  $\gamma$  be the counterclockwise parameterization of the unit circle centered at the origin. Compute the integral

$$\int_{\gamma} \frac{e^z}{z^n} dz$$

for every integer  $n$ .

**Problem 5.6.** Let  $\gamma$  be the clockwise parameterization of the circle of radius 2 centered at  $1 + i$ . Compute

$$\int_{\gamma} \frac{dz}{z^4 - 1}.$$

**Problem 5.7.** Taylor 2.7.1

**Problem 5.8.** Taylor 2.7.8

**Problem 5.9.** Taylor 2.7.9

**Problem 5.10.** Taylor 2.7.10