

**Exercise 4**

Let  $C$  denote the positively oriented circle  $|z| = 2$  and evaluate the integral

$$(a) \int_C \tan z \, dz; \quad (b) \int_C \frac{dz}{\sinh 2z}.$$

$$\text{Ans. (a) } -4\pi i; \quad (b) -\pi i.$$