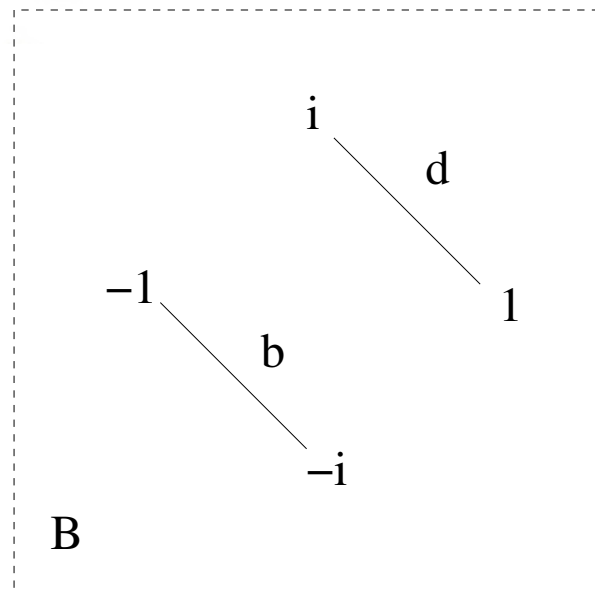
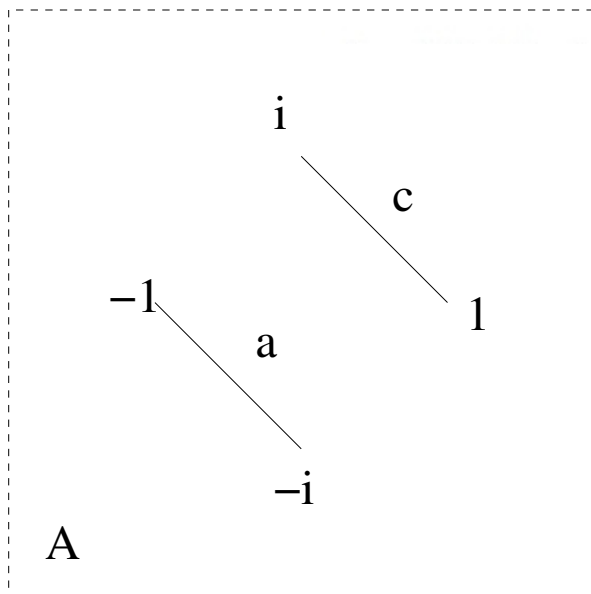
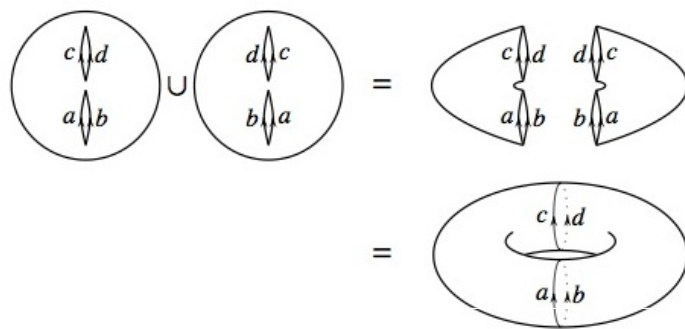
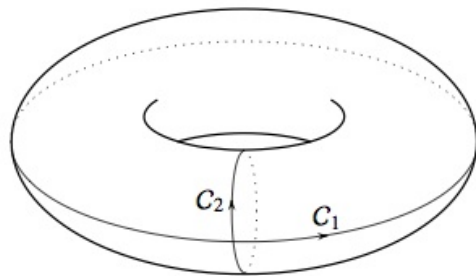


Exercise 2: Indicate two curves  $C_1$  and  $C_2$  on the torus on the two sheets  $A$  and  $B$  of the Riemann surface (1851 form) of  $f(t) = \frac{1}{\sqrt{1-t^4}}$  at the bottom of the page.



The domain of the function is two sheets  $A$  and  $B$ , with four branch points  $(1, i, -1, -1)$  (where the function is just like  $\frac{1}{\sqrt{z}}$  at  $z = 0$ ), and two slits from  $1$  to  $i$  and from  $-1$  to  $-i$ . Note: in putting together the two “spheres” with slits, notice that each sphere also includes a point  $\infty$ .