Proof strategy

- We will prove the following:

$$1 \implies 2, \quad 2 \implies 1, \quad 1 \implies 3, \quad 3 \implies 1.$$

- It would also be ok to prove

$$1 \implies 2, \quad 2 \implies 3, \quad 3 \implies 1$$

which is what the book does. This would be more efficient but I think it's not as clear.