Topology, fall 2015

Homework 9, due Wednesday November 18 before class.

Read §55 (not including Theorem 55.8 at the end), §56, §58.
Write solutions to exercises 1, 2 on page 353, exercise 1 on page 356,
and exercises 2, 4 on page 366.

I. Prove that the fundamental group of the product is naturally
isomorphic to the product of fundamental groups,

$$\pi_1(X \times Y, x_0 \times y_0) \ \cong\ \pi_1(X, x_0) \times \pi_1(Y, y_0),$$

for any two spaces X, Y with basepoints x_0, y_0.