

The Seating Problem

Names of students in your group:

Submission: Each student must submit their answer separately in PDF form to Moodle by the end of the class. No email submissions are allowed. Google how to convert a Google doc to a PDF if you haven't done it before.

The Problem

134 people line up to be seated in a train with 134 seats. Unfortunately the 17th traveler lost his ticket, so he randomly chooses a seat instead of his assigned seat. After that, each person entering the train either sits in their assigned seat, if it is available, or, if not, chooses an unoccupied seat randomly.

Question

When the 134th passenger finally enters the train, what is the probability that she finds her assigned seat unoccupied?