

MAA Metro NY
May 2025, Problem of the Month
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Suppose that there are 100 passengers, numbered 1 through 100, boarding a plane that has exactly 100 seats. Passenger number 1 is the first to board the plane and randomly takes a seat. Passenger number two boards next and will sit in seat number 2 unless it is already occupied. In that case, passenger number 2 will take a random seat. This continues for passengers through passenger number 99. Which seats are available for passenger number 100 and what are their probability.

Computer or AI assisted/generated solutions will not be accepted.