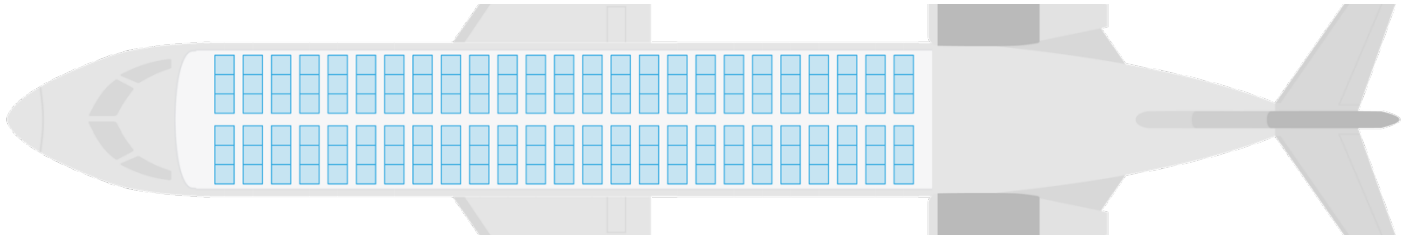


Name _____

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PART ONE: OVERBOOK 'EM, DANNO

- 1 For various reasons – e.g. a change in plans, missed connection – passengers don't always show up for their flights. According to some estimates, the average no-show rate is around 10%. If an airline sold 150 tickets for a 150-seat plane, what's the probability that the flight would be full?



- 2 Let's assume the price of a one-way ticket is \$350. If the airline wanted the flight to be full, how many tickets would you recommend that it sell, and how much more money would it make by overbooking the flight?
- 3 Imagine the airline sells the number of tickets you suggested. Calculate the probability that *exactly* 150 passengers show up for the flight. What do you think should happen if more than 150 passengers show up?

PART TWO: BILL OF FLIGHTS

- 4 The Passenger Bill of Rights requires airlines to compensate passengers who are involuntarily bumped from flights. Depending on the length of the delay and the price of the ticket, compensation can be up to \$1,550. Watch the video about this.

Then, imagine an airline sells 166 tickets for a 150-seat flight. For each number of “show ups,” calculate the probability that exactly this many people arrive for the flight, and the amount the airline would *expect* to pay in compensation. Based on this, do you think it’s a smart financial decision for the airline to overbook the flight?

SHOW-UPS	151	152	153	154	155	156	157	158
COMPENSATION	\$1,550	\$3,100	\$4,650	\$6,200	\$7,750	\$9,300	\$10,850	\$12,400
PROBABILITY								
EXPECTED COMP.								
SHOW-UPS	159	160	161	162	163	164	165	166
COMPENSATION	\$13,950	\$15,500	\$17,050	\$18,600	\$20,150	\$21,700	\$23,250	\$24,800
PROBABILITY								
EXPECTED COMP.								

- 5 Some people think it’s unfair for airlines to sell more tickets than there are seats. Others argue it’s a necessary part of the airline business. Do you think airlines should be allowed to overbook flights? Why or why not?