

Math 243 – Hand in Homework 3

Name:

Box and label answers, show all work.

The bombardier Q400 has seating capacity for 76 passengers. A study finds that 93.6% of passengers show up for their flights on this aircraft flying out of Medford. Horizon Air decides to book 80 passengers for this flight to maximize profits. **Show how you arrived at your answers.**



x	P(x)
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	

1. Use your calculator to fill in the given portion of the probability distribution for the airline. Round to 4 decimal places and use 0+ for probabilities $< .0001$.
2. Find the probability that exactly 76 passengers will show.
3. Find the probability that the flight will be overbooked.
4. Find the probability there will be at least 1 empty seat.