

Name:

ID#:

Section 4

Serial

Q1: According to NASA, each space shuttle in the U.S. fleet has several "critical items" that could lead to catastrophic failure if broke down during flight. NASA estimates that the chance of at least one critical-item failure within the shuttle's main engines is about 0.016 for each mission. To build space station Freedom, NASA plans to fly eight independent shuttle missions a year during the reminder of the 1990s. Find the probability that at least one of the eight shuttle flights scheduled results in a critical-item failure.

Q2: At checkout customers arrive at an average of **1.5 per minute**, what is the probability that **at least 3** will arrive **within 2 minutes**?

Q3: In a certain class of 30 students 60% of them are seniors.

- a. If four students, at once, are randomly selected, what is the probability that **at least 3** of them are seniors?

-
- b. What is the probability that the **first** senior is the **third** student selected?

-
- c. If 10 students were selected **one by one** and asked, what is the probability that only 4 of them are seniors?

With My Best Wishes