

**Module 3A Questions:**

Use the following site to answer the questions:

<https://homepage.divms.uiowa.edu/~mbognar/applets/binnormal.html>

- A. 70% of colon cancers are cured if detected early using a new screening test; what is the probability that 9 out of 10 patients are cured?
- B. 12 people have been exposed to a particular disease. Each one independently has a 40% chance of contracting the disease. A small, county hospital has the capacity to handle 9 cases of the disease. What is the probability that the hospital's capacity will be exceeded?
- C. Asymmetry is present in animals in many of their preferences including hand usage and dominant eye and ear. To test ear usage in human beings, an observer scored whether the person approached turned either the left or right ear toward the questioner. Of 12 participants, 10 turned the right ear toward the questioner and 2 offered the left ear. **Calculate the probability of this outcome assuming that ear usage would be equal under the null hypothesis of no preference.**

How about this question:

- D. A woman has three sons. What is the probability that her next child is a girl?