

IV. Using the answer to question III or statistics software, answer the following questions.

- A. $P(x = 4)$ is _____ B. $P(x > 2)$ is _____ C. $P(x < 3)$ is _____ D. $P(x \leq 4)$ is _____

V. Darin is interested in how busy his complaint department is during any 20-minute period. Data shows the expected number of calls is highly skewed with an average of only 1.0 calls per 20-minute period.

- A. Assuming a Poisson probability distribution and using a formula or statistics software, is the probability of zero calls being received in a 20-minute period over or under 50%?

B. Using a table or statistics software, complete and draw this distribution.

C. What is the probability that at least 3 calls are received in a 20-minute period?

VI. Darin is interested in the number of customers who bounce a check. Last year only .2% of the 1,000 checks deposited from customers did not clear. This year Darin expects 1,500 customers will pay by check and with the economy being about the same, the same percent of checks should bounce.

A. Can the Poisson approximation of the binomial be used to solve this problem? Why?

B. What is the expected number of bounced checks for this year?

C. What is the probability that no one will bounce a check this year?

D. What is the probability that at least 2 checks will bounce?

E. What would you think if 5 checks had bounced by the end of May?