1. What happens to the mean and mode of \( B(x) = \binom{n}{x} p^x (1 - p)^{n-x} \) if \( n \) is constant and \( p \) increases from 0 to 1?

2. The expression \( \binom{n}{k} p^k (1 - p)^{n-k} \) gives the probability of getting exactly a success in b trials of a c experiment in which the probability of success on each trial is d.
   a. ______________________  b. ______________________
   c. ______________________  d. ______________________

3. Suppose the Food and Drug Administration is testing a new prescription medication which the manufacturer claims has a 70% success rate. Assume the success rate and find the probability that at least 70% of the subjects given the medication will respond positively for the given number of people.
   a. 10 people ______________________  b. 20 people ______________________

4. a. Create a table of values for the function \( B(x) = \binom{10}{x} (0.35)^x (0.65)^{10-x} \).
   b. Graph the function \( B(x) \).

5. Give two reasons why the graph below cannot represent a binomial probability distribution.

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