**MAT150 Statistics Assignment #11** [**www.helpyourmath.com/150.5**](http://www.helpyourmath.com/150.5)

1. Given the number of trials and the probability of success, determine the probability indicated:
   1. n = 15, p = 0.4, find P(4 successes)
   2. n = 12, p = 0.2, find P(2 failures)
   3. n = 20, p = 0.05, find P(at least 3 successes)

1. An FBI survey shows that about 30% (i.e., 0.3) of all property crimes go solved. Suppose that in New York City 15 such crimes are committed and they are each deemed independent of each other.
   1. What is the probability that exactly 3 of these 15 crimes will be solved?

* 1. What is the probability that at most 3 of these 15 crimes will be solved?

* 1. What is the probability that more than 11 of these 15 crimes will be solved?

1. A company makes Citi bikes. 95% (i.e., 0.95) pass final inspection. Suppose that 5 bikes are randomly selected.

* 1. What is the probability that exactly 4 of these 5 sports bikes pass final inspection?

* 1. What is the probability that less than 3 of these 5 sports bikes pass final inspection?