STATISTICS APPLIED TO BUSINESS ADMINISTRATION. ACADEMIC YEAR 2014-2015 PRACTICAL EXERCISES 1 AND 2 (20 MINUTES)

Date: _____

Complete name:_____ ID number:_____

EXERCISE 1 (10 POINTS)

The probability that a person listens to a given radio morning program is 0.40. We assume independence between the different people listening to the radio morning program.

1. **(3 points)** If we take a random sample of 15 people, what would be the probability that 8 of them listen to that radio program?
2. **(3 points)** What would be the probability that, among the aforementioned 15 people, there are more than 5 people that **do not** listen to that radio program?
3. **(4 point)** If we now take a random sample of 250 people, what would be the approximate probability that, among them, there are no more than 106 people that listen to that radio program?

EXERCISE 2 (10 POINTS)

The number of people that arrive each hour at a given supermarket in a shopping mall follows a Poisson distribution with variance equal to 1.5. We assume independence between the different people arriving at the supermarket.

1. **(4 points)** What is the probability that, in a given hour, exactly 3 people arrive at the supermarket?
2. **(2 points)** What is (are) the most likely number(s) of clients that arrive, in a given hour, at the supermarket?
3. **(4 points)** What is the probability that, in a period of 30 hours, at least 42 people arrive at the supermarket?