Answers of Exercise on Discrete Probability

1) Hospital records show that of patients suffering from a certain disease,%75% die of it. What is the probability that of 6 randomly selected patients, 4 will recover?
Answer: 3.3%

2) A (blindfolded) marksman finds that on the average he hits the target 4 times out of 5. If he fires 4 shots, what is the probability of(a) more than 2 hits?(b) at least 3 misses

Answer: a) 81.92% b) 2.72%

3) A manufacturer of metal pistons finds that on the average, 12% of his pistons are rejected because they are either oversize or undersize. What is the probability that a batch of 10 pistons will contain (a) no more than 2 rejects? (b) at least 2 rejects?

Answer: a) 89.13% b) 34.17%

4) A life insurance salesman sells on the average 3 life insurance policies per week. Use Poisson's law to calculate the probability that in a given week he will sell

1. 2 or more policies but less than 5 policies.
2. Assuming that there are 5 working days per week, what is the probability that in a given day he will sell one policy?

Answer: 1) 61.61% 2) 32.92%

5) Vehicles pass through a junction on a busy road at an average rate of 300 per hour.

1. Find the probability that none passes in a given minute.
2. What is the expected number passing in two minutes?
3. Find the probability that this expected number actually pass through in a given two-minute

Answer: 1) 0.67% 2) 10 3) 12.51%