1. If the mean number of serious accidents per year in a large factory (where the number of employees remains constant) is five. Find the probability that in the current year there will be

(a) exactly seven accidents

(b) no accidents

(c) ten or more accidents

(d) fewer than five accidents

(e) between 4 to 8 accidents

2. The table below is the data collected from a group of 512 students. X represents the number of different foreign countries visited, and corresponding to it, the number of students is given.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. of countries visited (X) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| No. of students (f) | 56 | 156 | 132 | 92 | 37 | 22 | 12 | 4 | 1 |

fit a poison distribution

Normal distribution

3. Suppose it is known form past studies that the IQ scores of all elementary school children (in a particular geographical region) approximately follow a normal distribution with mean = 115 points and S.D = 8 points.

1. What percentage of the children has IQ score more than 130 points?
2. What percentage of the children has IQ score less than 90 points?
3. What percentage of the children has IQ score between 100 to 120?
4. It was decided that the top 20 % of the children would be sent to the school. What is the minimum IQ score to get a child qualified for the school?
5. If the lowest 5 % of the students are sent to a special education program, what is the minimum IQ score of the children in this group?