Problem 1: Find the distribution!

These are the data-set for the number of car accidents in the rush hour of a small city. You are assigned to predict the **number of car accidents in a given hour of the day**. You need to find the full probability distribution of this quantity.

Also, make sure to clearly **state the assumptions** you are making at each step.

16	24	16	12	16	11	14	15	9	14	7

Table 1: The Number of Accident during rush hour

Tip: *You can/should make reasonable assumption about the data.*

Problem 2: Find the parameters!

Write a python function to find μ and σ:

$$N(x|\mu,\sigma) = N(x|\mu_1,\sigma_1)N(x|\mu_2,\sigma_2)...N(x|\mu_N,\sigma_N)$$

In which N is a Normal distribution:

$$N(x|\mu,\sigma) = \frac{1}{\sqrt{2\pi\sigma^2}}\exp(-\frac{(x-\mu)^2}{2\sigma^2})$$

Your function should take two vectors:

$\vec{\mu}$= `numpy.array`$[\mu_1,\mu_2,...,\mu_N]$
$\vec{\sigma}$= `numpy.array`$[\sigma_1,\sigma_2,...,\sigma_N]$

And return μ and σ.