HW Assignment-3

# Question 1

Probability distribution of a Gaussian distribution

The probability values of the Gaussian Distribution over X

Taking the log-likelihood (£)

To find the MLE of log-likelihood we maximize the function by taking partial derivative of and V and set it to zero.

## MLE of

## MLE of

# Question 2

## Method 1

|  |  |  |  |
| --- | --- | --- | --- |
| Use Kit Test\Disease | Yes | No |  |
| Positive | 90 | 792 | 882 |
| Negative | 10 | 9108 | 9118 |
|  | 100 | 9900 | 10000 |

## Method 2