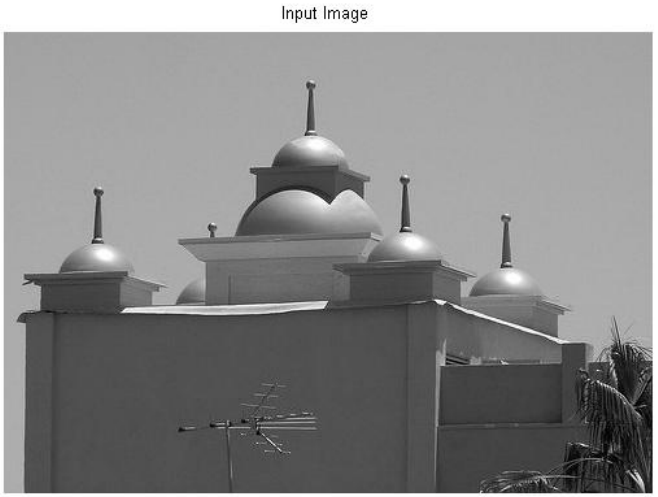
Exercise Sheet 3

Probability Density Estimation

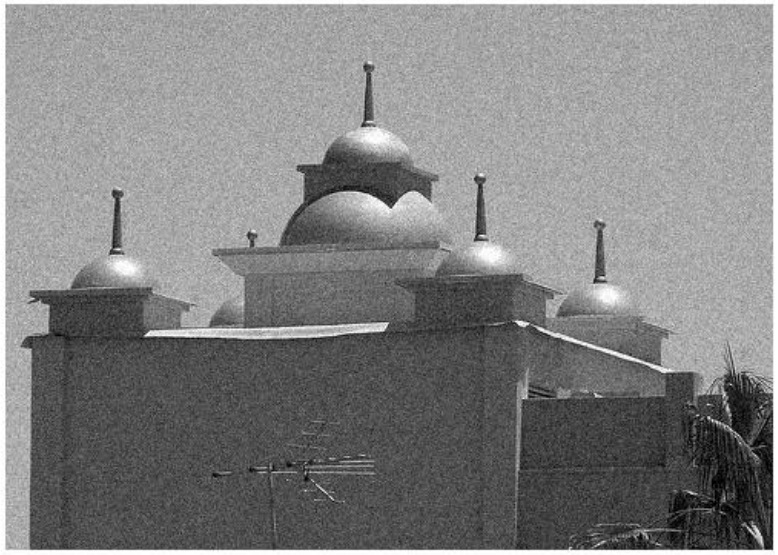
Problem 3.1 Data

Problem 3.1 Data

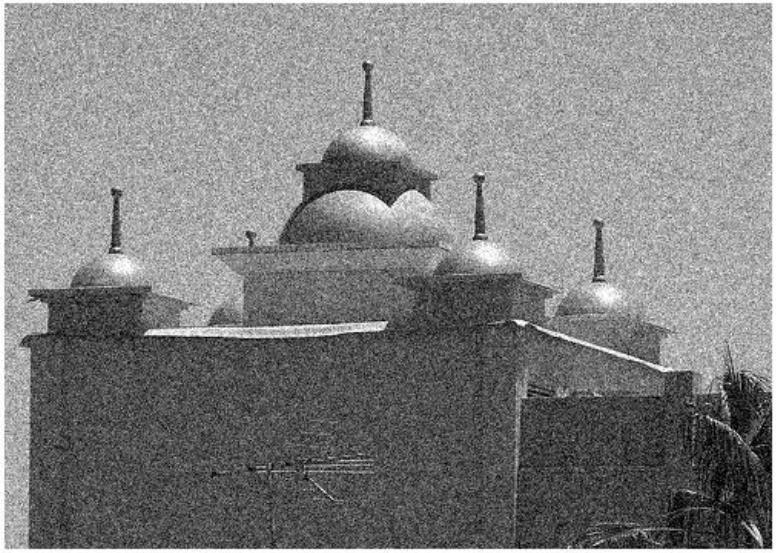
Input Image:



σ = 0.05



σ = 0.1



Problem 3.2 Kernel Density Estimation

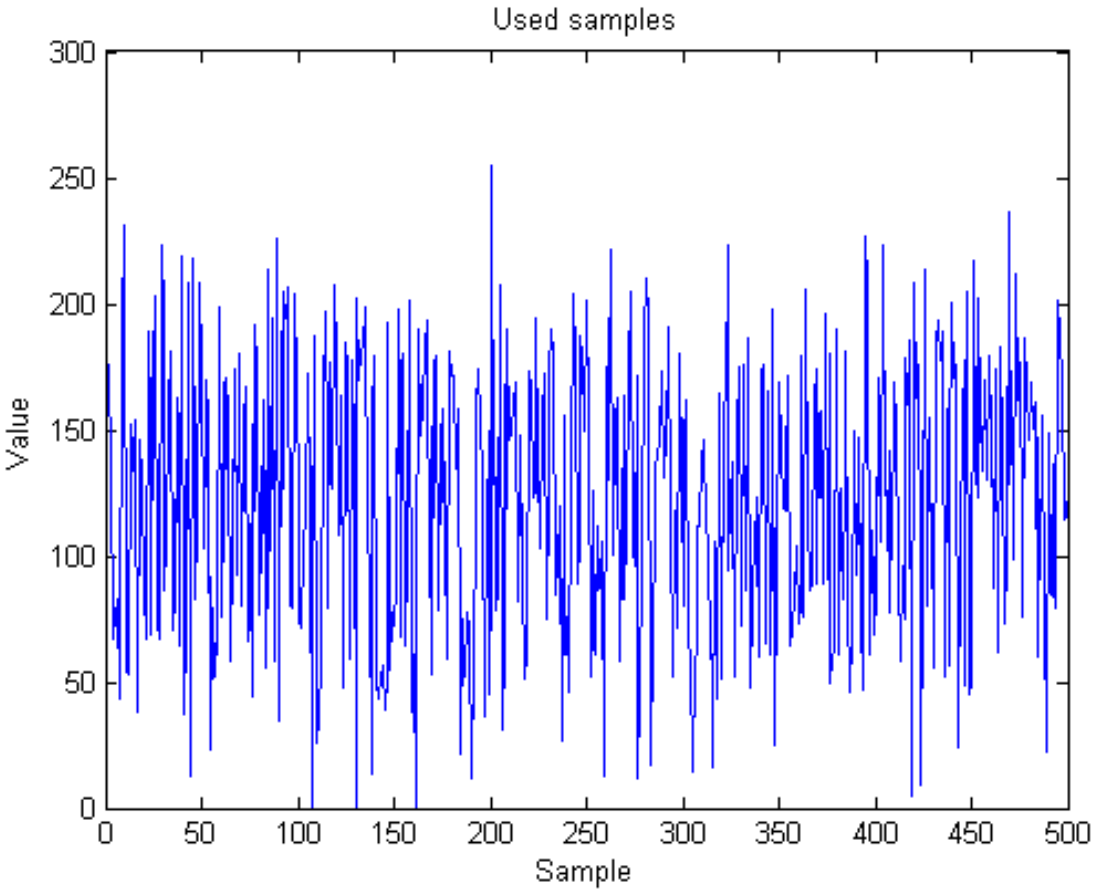
Problem 3.2 Kernel Density Estimation

Values:

σ = 0.1

P = 500

Used Samples:



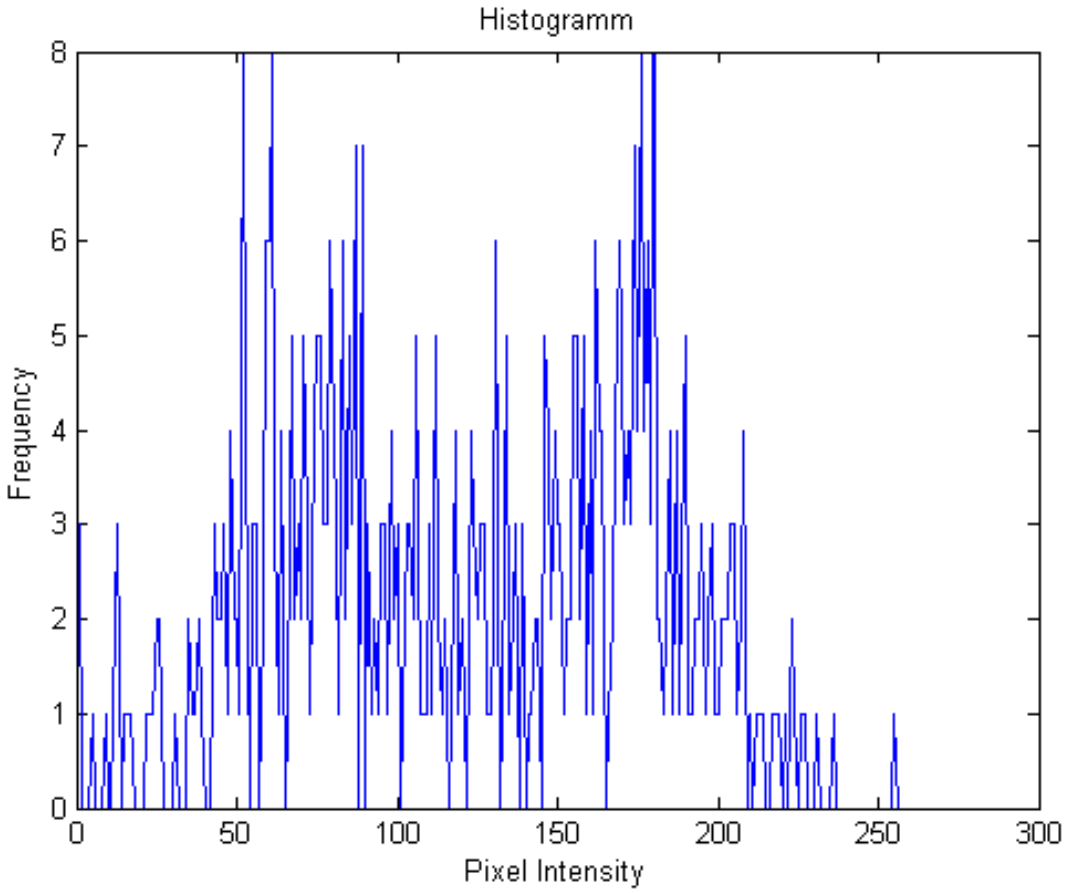
Problem 3.2 Kernel Density Estimation

Values:

σ = 0.1

P = 500

Histogramm – Version:



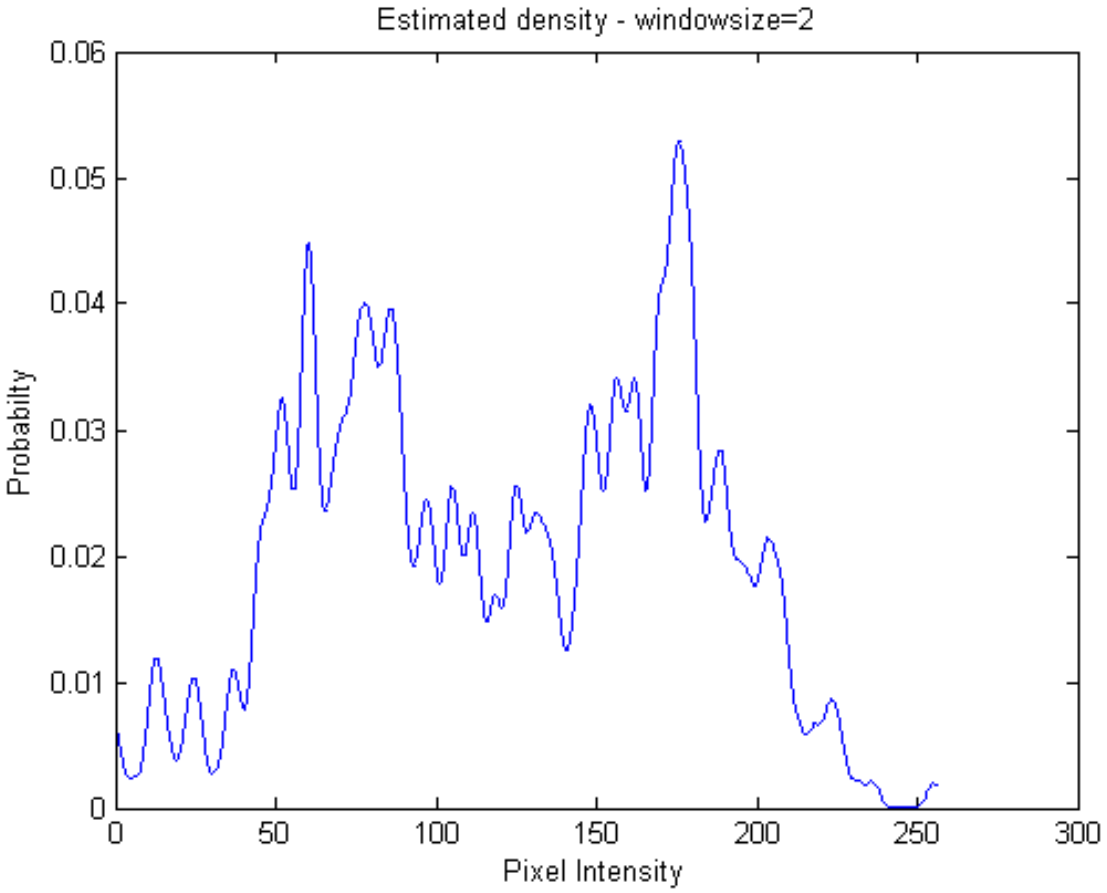
Problem 3.2 Kernel Density Estimation

Values:

σ = 0.1

P = 500

Estimation – Version: **(h = 2)**



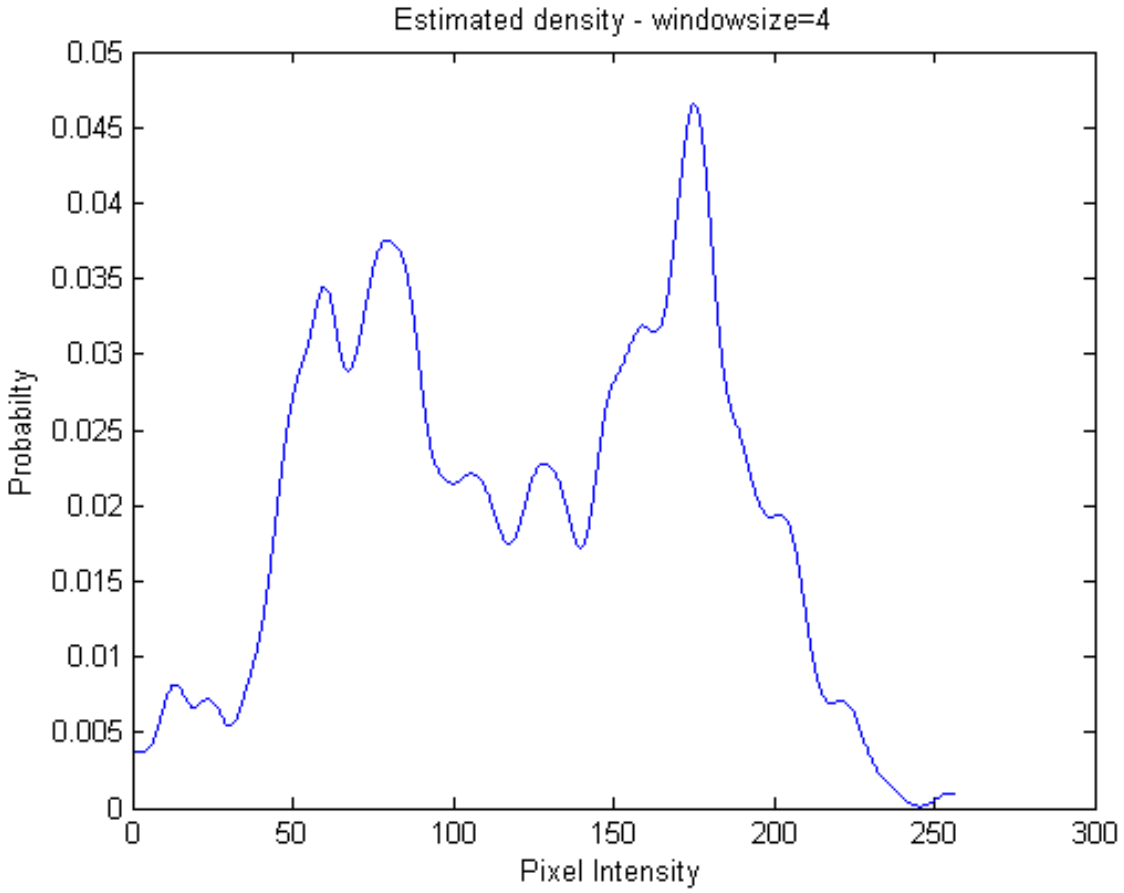
Problem 3.2 Kernel Density Estimation

Values:

σ = 0.1

P = 500

Estimation – Version: **(h = 4)**



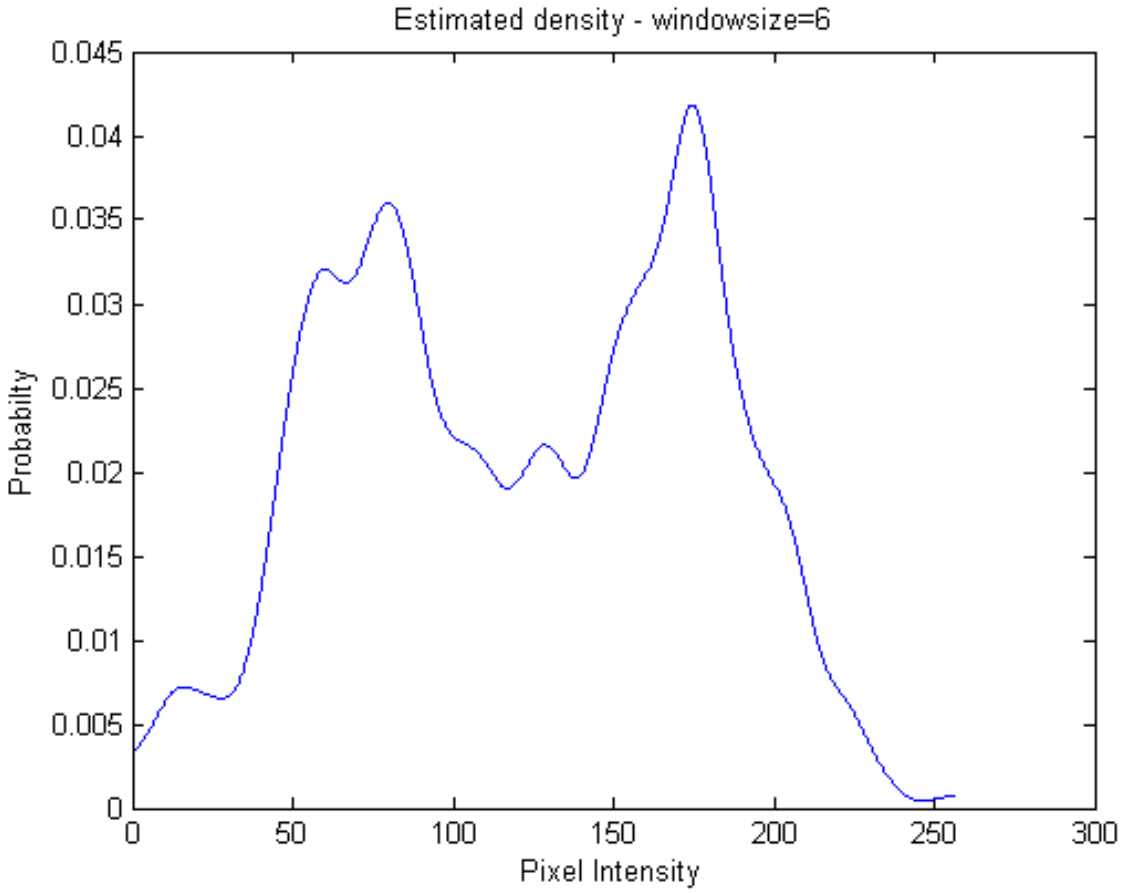
Problem 3.2 Kernel Density Estimation

Values:

σ = 0.1

P = 500

Estimation – Version: **(h = 6)**



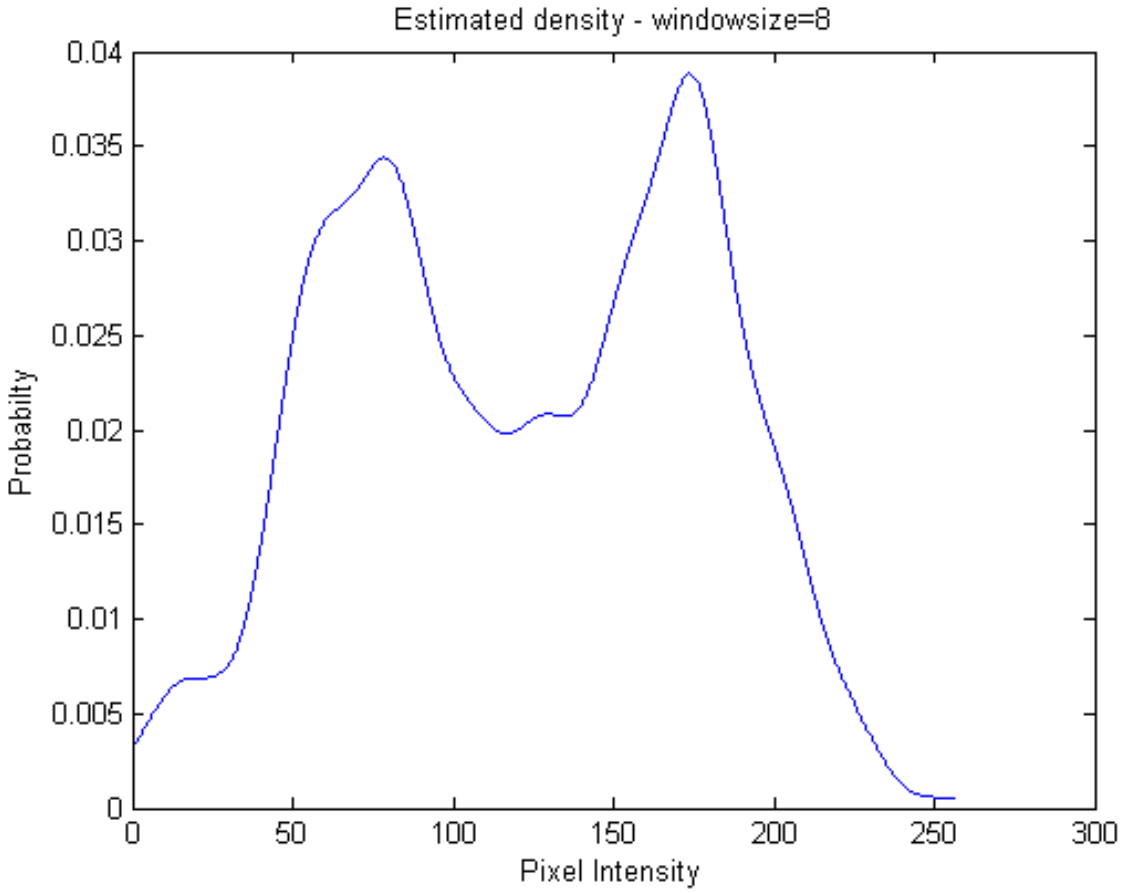
Problem 3.2 Kernel Density Estimation

Values:

σ = 0.1

P = 500

Estimation – Version: **(h = 8)**



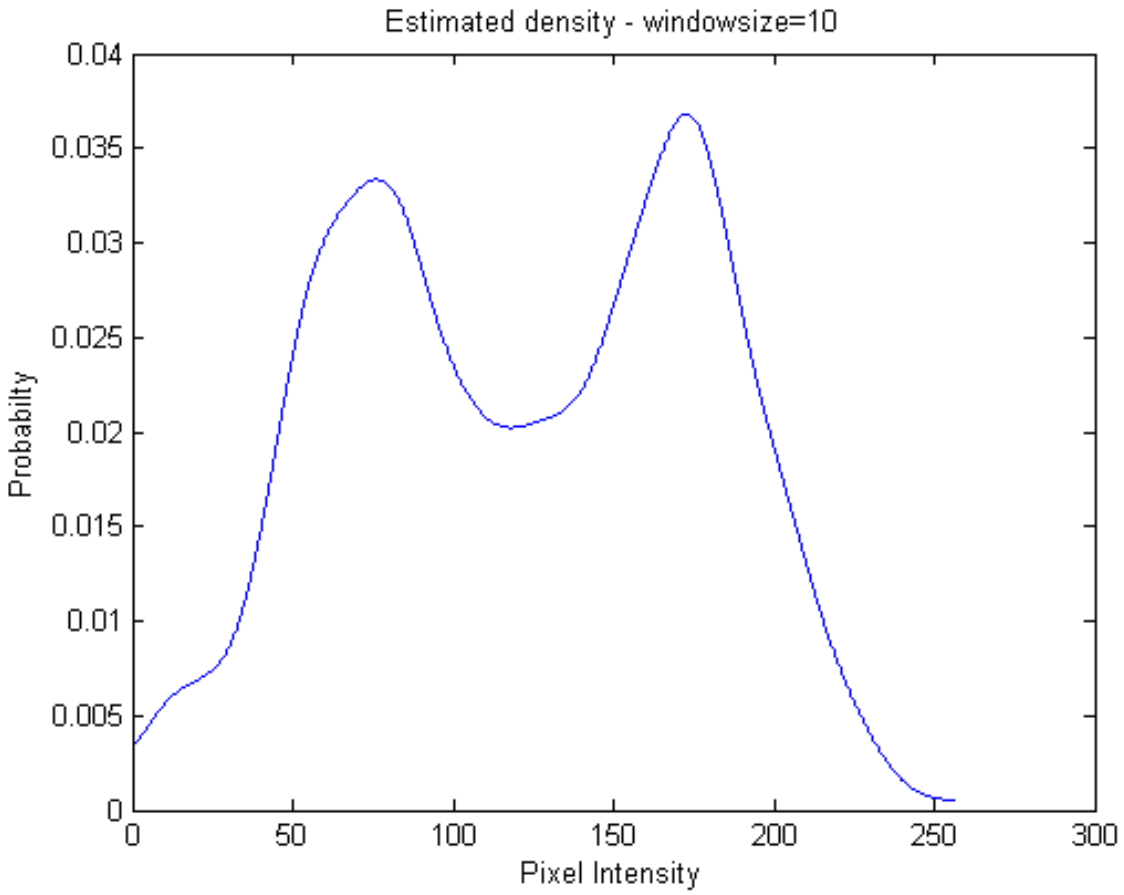
Problem 3.2 Kernel Density Estimation

Values:

σ = 0.1

P = 500

Estimation – Version: **(h = 10)**



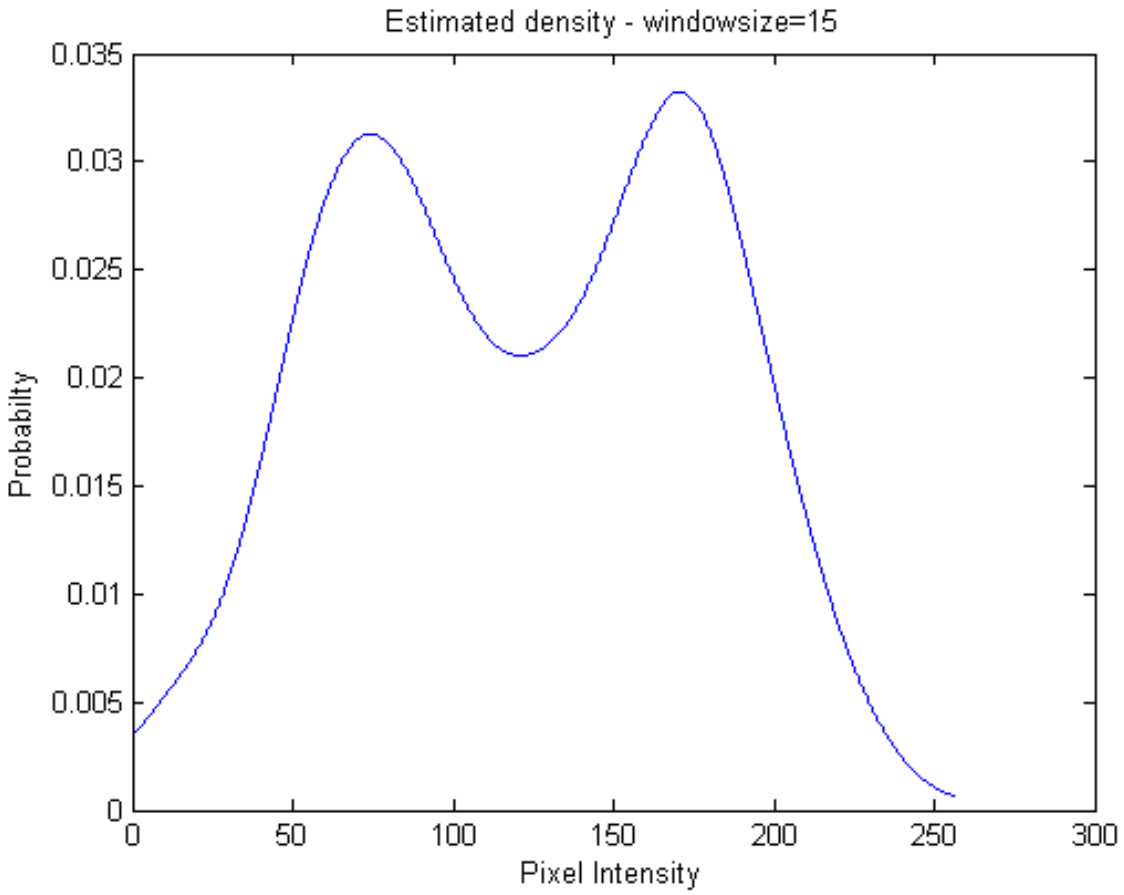
Problem 3.2 Kernel Density Estimation

Values:

σ = 0.1

P = 500

Estimation – Version: **(h = 15)**



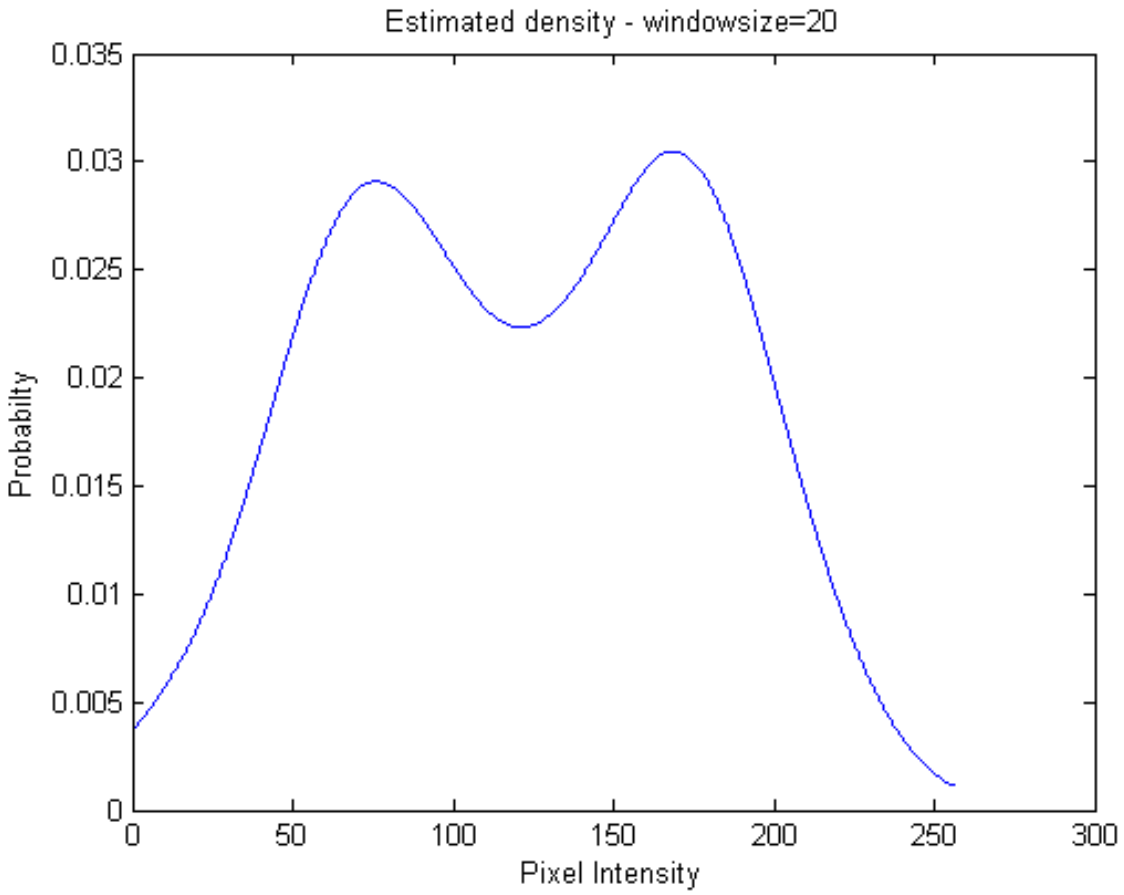
Problem 3.2 Kernel Density Estimation

Values:

σ = 0.1

P = 500

Estimation – Version: **(h = 20)**



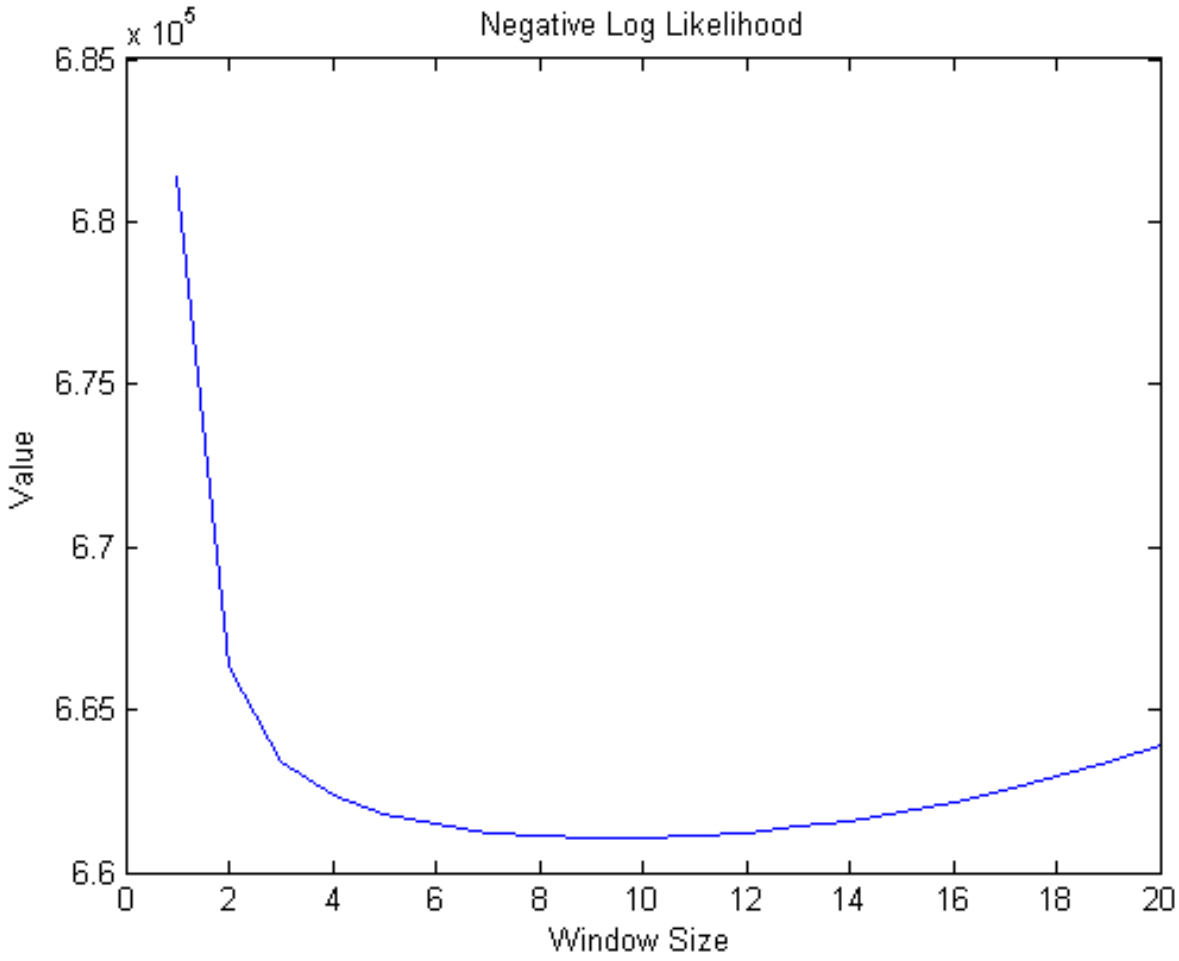
Problem 3.3 Validation

Problem 3.3 Validation

Values:

σ = 0.1

P = 500



Minumum at:

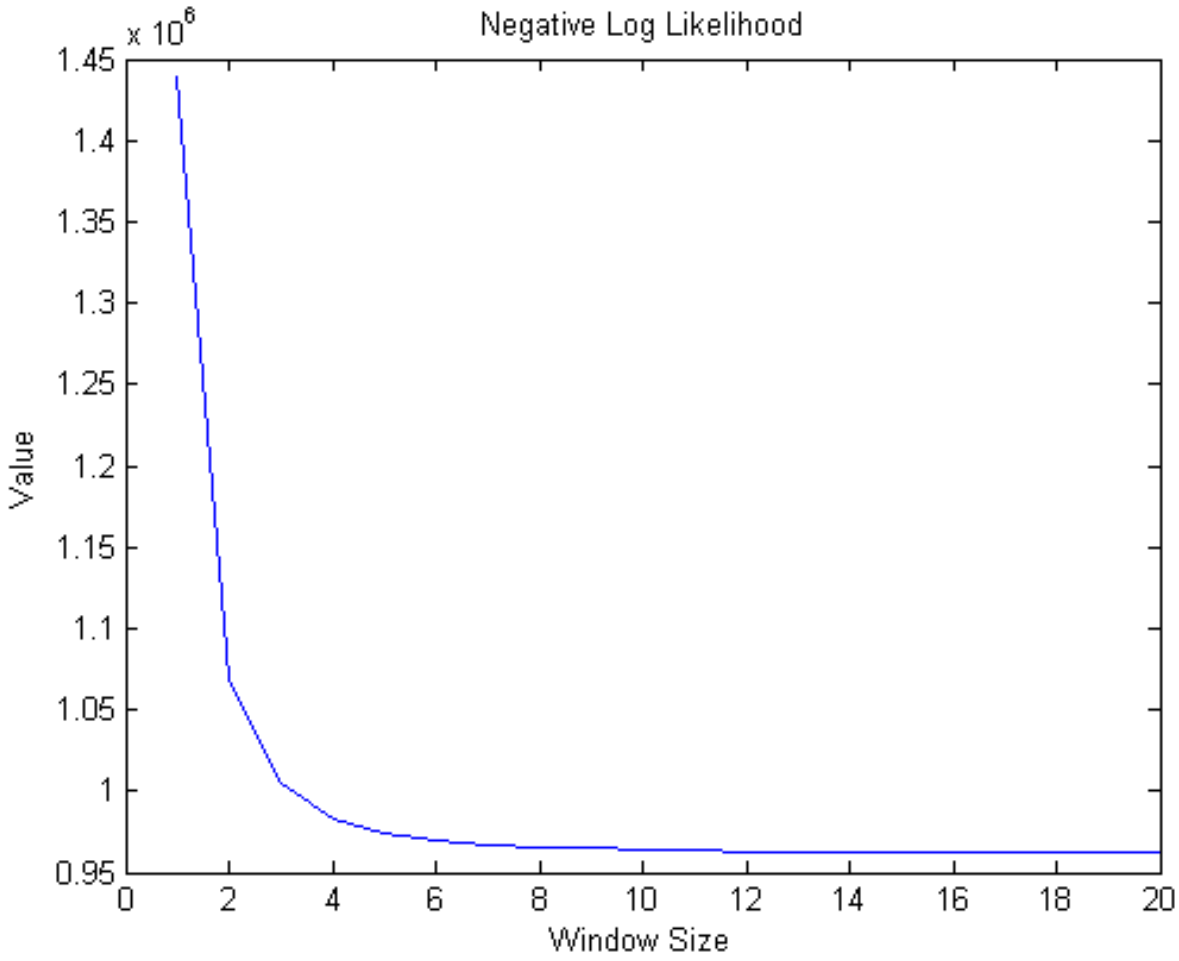
h = 9 … 12

Problem 3.3 Validation

Values:

σ = 0.1

P = 100



Minumum at:

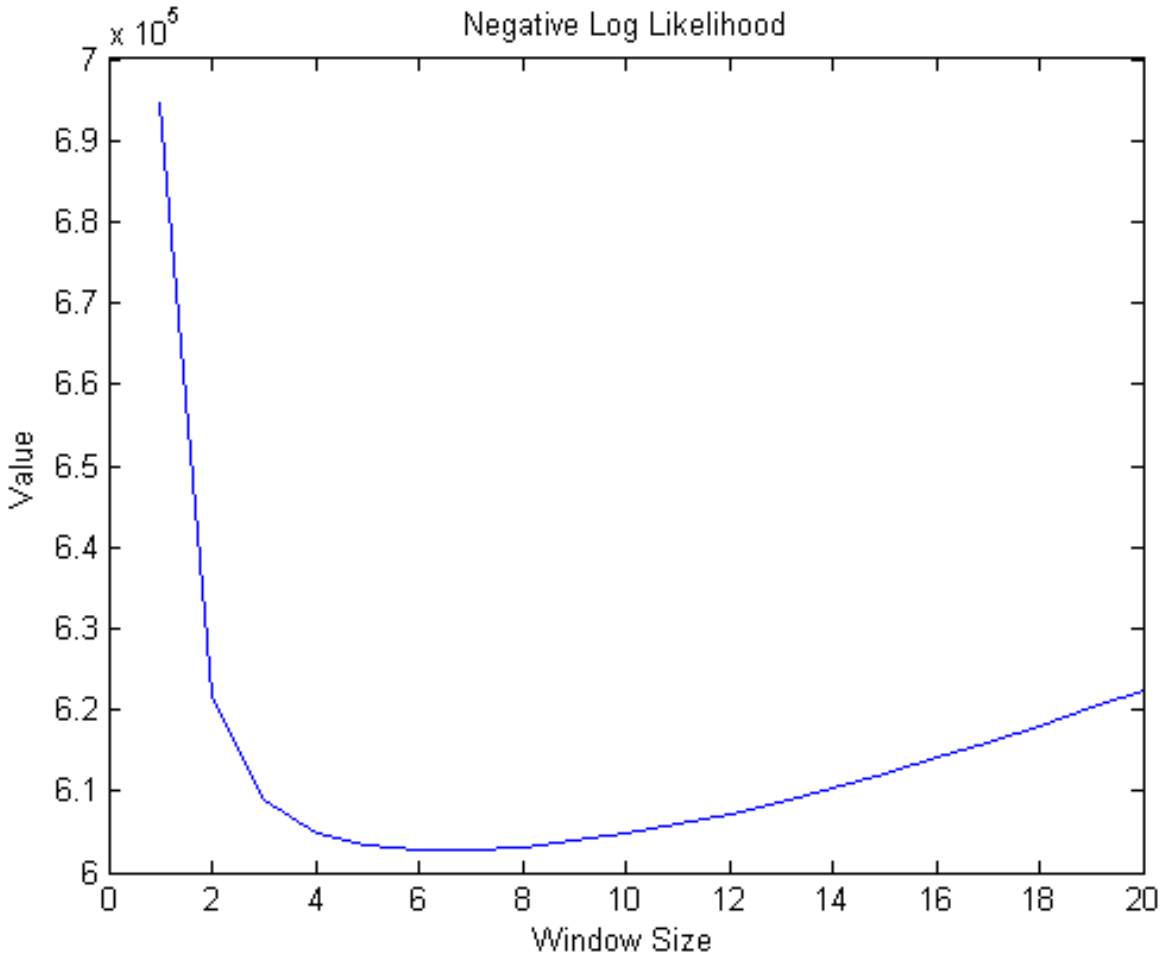
h = 17 … 19

Problem 3.3 Validation

Values:

σ = 0.05

P = 500



Minumum at:

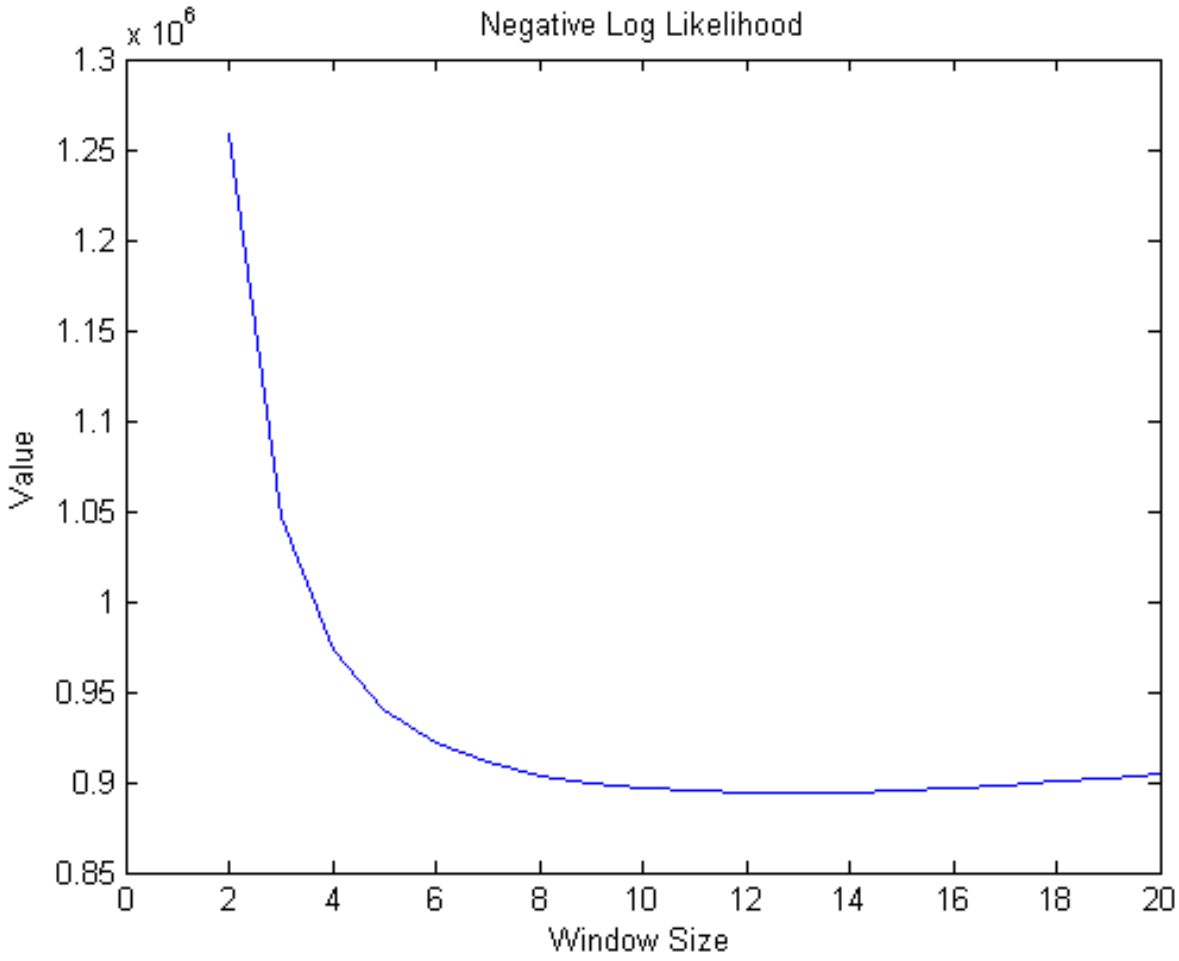
h = 6 … 8

Problem 3.3 Validation

Values:

σ = 0.05

P = 100



Minumum at:

h = 10 … 14