| | | |
|---|---|---|
| | | |

**Alexandria University**
**Parallel Computing**
**Faculty of Engineering**
**Assigned: 10/20/2023**
**Computer and Systems Engineering Department**

**Due: 27/10/2023**

# Mathematica LAB

## Assignment 1

The Following graph represents Functional dependency $F(\gamma, q) = S\gamma(p, n)$ of the speedup for a varying number of compute units $p = 2q$, varying computation-to-communication ratios $\gamma$, and a fixed amount $n = 210$ of processed numbers (strong scaling). The thick line represents the points of optimal speedups $S\gamma(p(\gamma), n)$ where $p(\gamma) = \gamma \ln 2\gamma + 2n$ for the introductory example discussed in chapter 1.

| | | |
|---|---|---|
| | | |

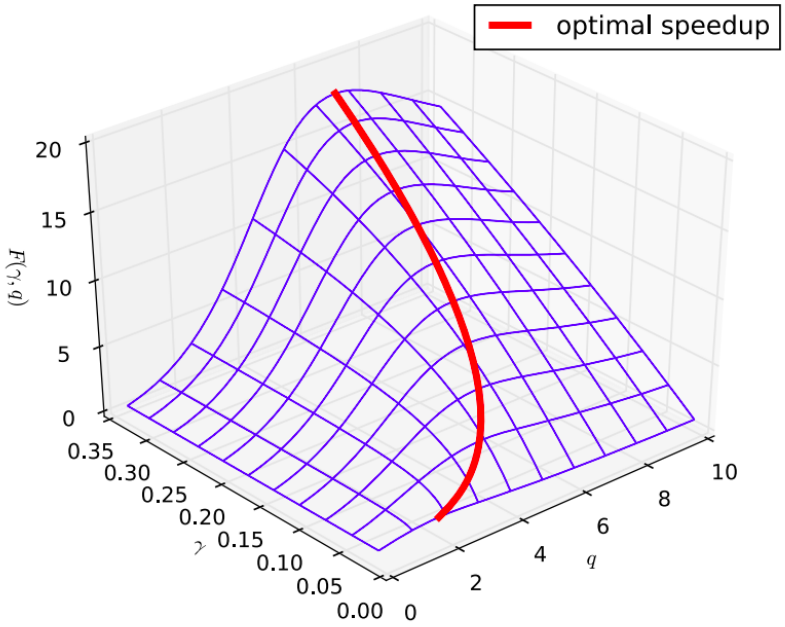


**FIGURE 1.6**

## Requirements:

- Plot the previous graph using Jupiter
- deliver a report explaining your work

**Due Date:** Tuesday 27/10/2023 @ 13:59

**Late delivery** = -25% for each day of delay.

| | | |
|---|---|---|

**Good Luck**

| | | |
|---|---|---|