Assignment 15. Lagrange's interpolation and least square   Marks 10

Posted on 12.11.2025 @ 2:30 pm and due on 12.11.2025 @ 6:00 pm

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1. Use Lagrange's interpolation formula to find the best estimate for $y(6.7)$.

x	2	3	5	8	12
$y(x)$	10	15	25	40	60

2. Fit the data given in the table below with power law $y = ax^b$ and exponential $y = ae^{-bx}$ models. Based on Pearson's r^2, determine which model gives better fit.

x	2.5	3.5	5.0	6.0	7.5	10.0	12.5	15.0	17.5	20.5
y	13.0	11.0	8.5	8.2	7.0	6.2	5.2	4.8	4.6	4.3