King Abdulaziz University   MEP 365
Faculty of Engineering   Thermal Measurements
Mechanical Engineering   Fall 2021
         HW. # 02 on Ch. 4

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Problems are from the textbook:

Figliola, R. S., and D. E. Beasley, **Theory and Design for Mechanical Measurements**, John Wiley & Sons Inc., 6th edition 2015.

4.3 in your textbook with standard of deviation changed to 2.0 bar instated of 1 bar

4.9 in your textbook with the following temperature input data

i	1	2	3	4	5	6	7	8	9	10
T	26.0	26.5	24.7	25.5	24.9	24.8	28.2	23.7	24.5	25.8

11	12	13	14	15	16	17	18	19	20
27.1	23.9	24.4	25.1	26.5	24.1	25.7	22.1	27.1	25

Also use excel to plot the histogram of the above data using the bins: 23,24,25,26 and 27

4.28 in your textbook while changing the data to

i	1	2	3	4	5	6	7	8	9	10
x	924	931	910	927	930	915	925	933	926	923

4.31 in your textbook

4.36 in your textbook

4.42 in your textbook with the confidence interval changed from ±0.28 V to ±0.3 V

Additional problem

A. The following x, y data is to be presented in a graph

x	0.6	1.2	2.1	2.8	5.2	9.8			
y	1.5	4.6	10	52.8	200	1227			

Solve manually for curve fit of first order polynomial and use Excel (Trendline) for both first and second order cases.