FACULTAD DE INGENIERÍA

CÁTEDRA DE CÁLCULO NUMÉRICO

SECCIÓN 003

SEGUNDO TALLER 14-ENE-2020

QUESTION #1 Given the definite integral:

$$\int_0^3 (1{,}4 + 2Sen^2\left(\frac{x^{2{,}2}}{4}\right) + 1{,}1Cos(x))dx$$

Graph using Octave and determine which integration method is the best to estimate the result using 30 intervals

QUESTION #2 Given the following data:

X	1	1.2	1.4	1.6	1.8	2	2.2	2.4	2.6	2.8	3
Y	26.5	17.75	20.08	18.41	21.5	24.9	26.65	29.36	48.7	60.33	83.9

Make a third degree polynomial regression to estimate the value of y when x = 3.5

PREGUNTA #3 Using the same x-y table from #2, estimate the value of y when x = 1.5 using a third degree polynomial interpolation with Lagrange's method