Additional Exercises Lab9

Ex12

The following data shows the sales (in million dollars) of a company.

x	2015	2016	2017	2018	2019
y	12	19	29	37	45

Can you estimate the sales in the year 2020 using a least squares line?

Ex13

Find the vector in the column space of A closest to the vector b where:

$$A = \begin{bmatrix} 1 & 2 \\ 0 & -3 \\ 2 & 6 \end{bmatrix} \text{ and } b = \begin{bmatrix} 1 \\ 1 \\ 0 \end{bmatrix}$$

Hint: a vector in the column space of A should have the following format: $x \begin{bmatrix} 1 \\ 0 \\ 2 \end{bmatrix} + y \begin{bmatrix} 2 \\ -3 \\ 6 \end{bmatrix}$. Thus, using least square

solution to find x and y coefficients.

Ex14

Review previous weeks' assignments and do unfinished exercises. And submit to Lab9 assignment.