# CLL113 Classwork 4<sup>th</sup> th September 2019
## (Groups3&4)

Q. Use least-squares regression to fit a straight line to

| X$_1$ | 0  | 0  | 1  | 2  | 0  | 1  | 2  | 2 | 1  |
|-------|----|----|----|----|----|----|----|---|----|
| X$_2$ | 0  | 2  | 2  | 4  | 4  | 6  | 6  | 2 | 1  |
| y     | 14 | 21 | 11 | 12 | 23 | 23 | 14 | 6 | 11 |

Compute the coefficients, the standard error of the estimate

$$S_{y/x} = \sqrt{\frac{S_r}{n-(m+1)}}$$

and the correlation coefficient both by
1. Extension of Linear Regression
2. General Matrix Formulation