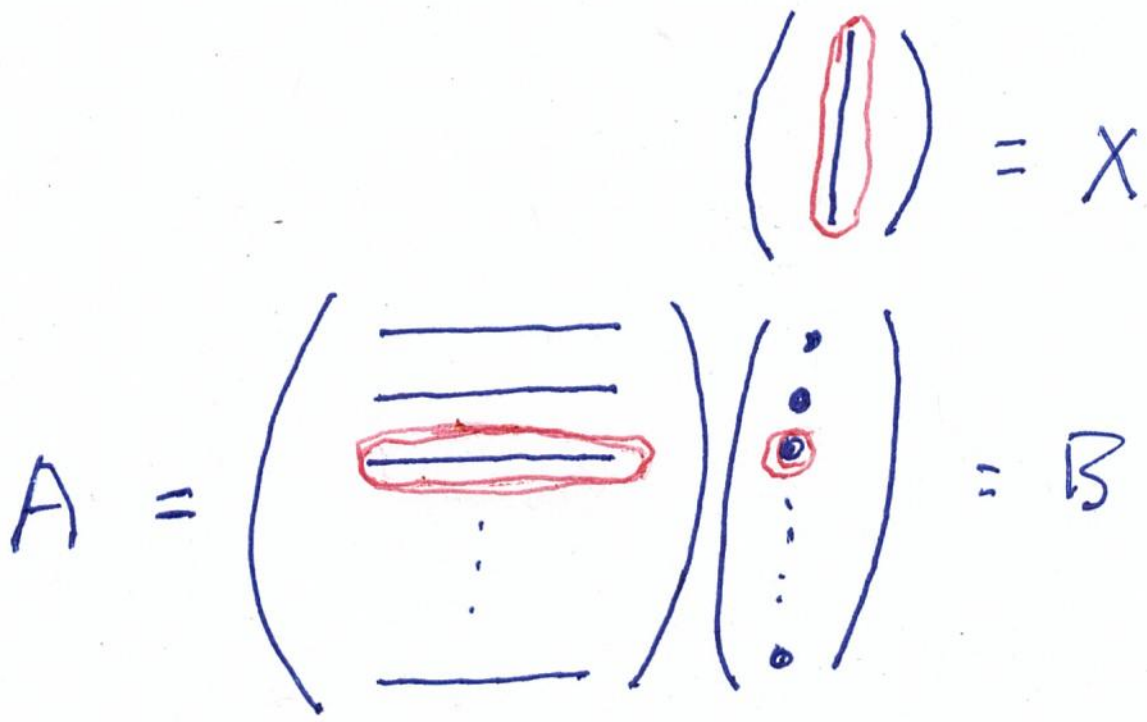

A is $m \times n$ X is $n \times 1$ B is $m \times 1$

Row$_i$ of A has length n X has length n

b_i is the dot product of Row$_i$ of A

$$\sum_{j=1}^{n} a_{ij} x_j = b_i$$

$$AX = B$$

$$a_{11} x_1 + a_{12} x_2 + \ldots + a_{1n} x_n = b_1$$

$$a_{21} x_1 + a_{22} x_2 + \ldots + a_{2n} x_n = b_2$$

$$\vdots$$

$$a_{m1} x_1 + a_{m2} x_2 + \ldots + a_{mn} x_n = b_m$$

m equations in n unknowns

Matrix Multiplication 1a