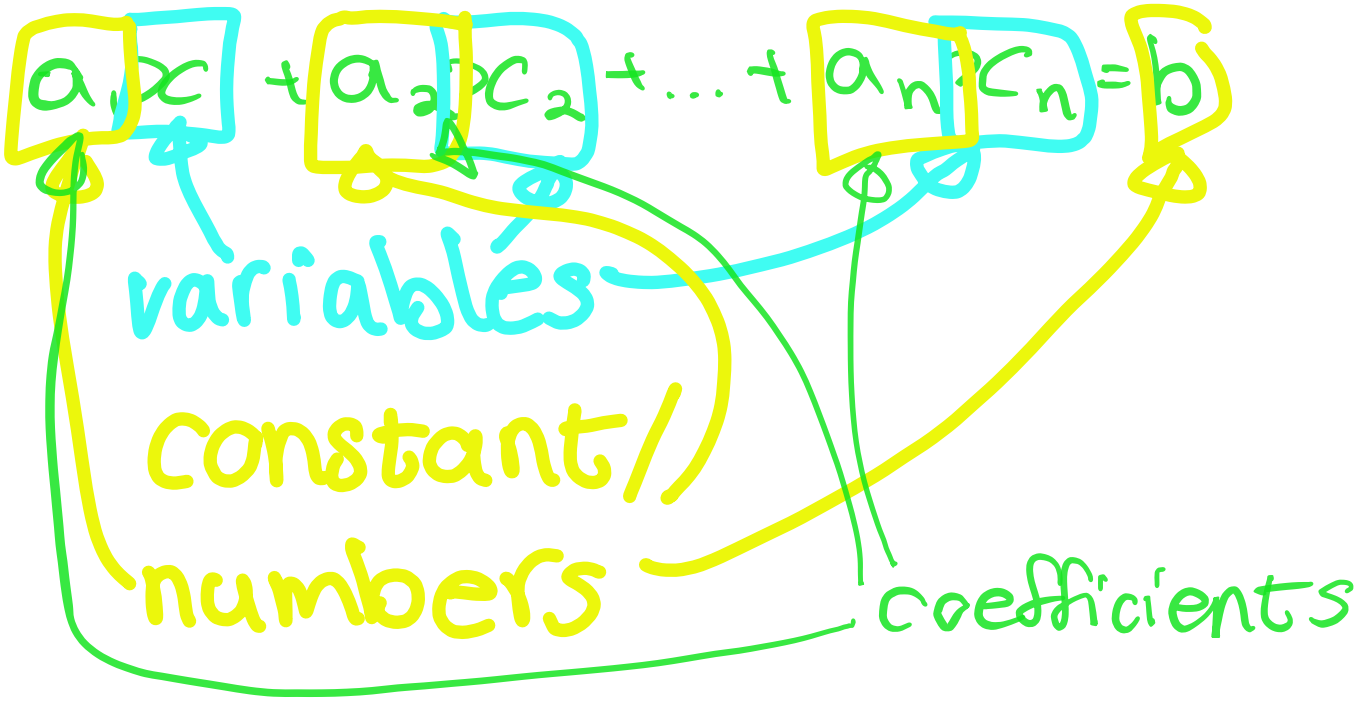
Lecture 1: Introduction



e.g. $2x + y - 8z = 10$

$-x_1 + \pi x_3 - \sqrt{2}x_4 = 0.007$

$2x - y + 6 = 13 - 4x$

bad examples

$\sqrt{x} + \frac{1}{y} = \omega z - 10$

cannot do these

Solution to an equation is a value for each variable that makes the equation true

e.g. $x=3, y=4, z=-5$

$$x-4y-6z=17$$

test $(3)-4(4)-6(-5)=17$

$$17=17$$

thus a vrable sdution

System of linear equations

- collection of one or more linear equations
- solution for a system of linear equations - true when plugged in for all equations
- solutions are written as ordered tuples $(s_1, s_2, \ldots, s_n)$