



$$\pi = \frac{C}{D}$$

$$\sum_{i=1}^N u_i$$

$$\sum_{i=1}^3 u_i = u_1 + u_2 + u_3$$

$$\sum_{i=4}^7 u_i = u_4 + u_5 + u_6 + u_7$$

$$\mathbb{N} = \{1, 2, 3, \dots, 137, \dots\}$$

$$\mathbb{Z} = \{\dots, -42, \dots, -1, 0, 1, \dots, 68, \dots\}$$

$$\sum_{i=1}^N a_i b_i = a_i b_i$$

$$\{a_1, a_2, \dots, \dots\}$$

$$\{b_1, b_2, b_3, \dots\}$$

$$\text{Max } U = 10x^2y$$

$$\text{Subject to } 5x + 10y - 1000 = 0$$

Introduce Lagrange multiplier:

L

$$\text{Maximise } M = U - L(5x + 10y - 1000)$$

$$M = 10x^2y - L(5x + 10y - 1000)$$

$$\frac{\partial M}{\partial x} = \frac{\partial M}{\partial y} = \frac{\partial M}{\partial L}$$

$$20xy - 5L = 0$$

$$10x^2 - 10L = 0$$

$$\underline{5x + 10y - 1000 = 0}$$

$$y = 100 - \frac{1}{2}x$$

$$F_{mn} = \partial_n A_m - \partial_m A_n$$

$$\partial_\mu F^{\mu\nu} = \mu_0 J^\nu$$

$$\tilde{F}^{\alpha\beta} = \epsilon^{\alpha\beta\mu\nu} F_{\mu\nu}$$