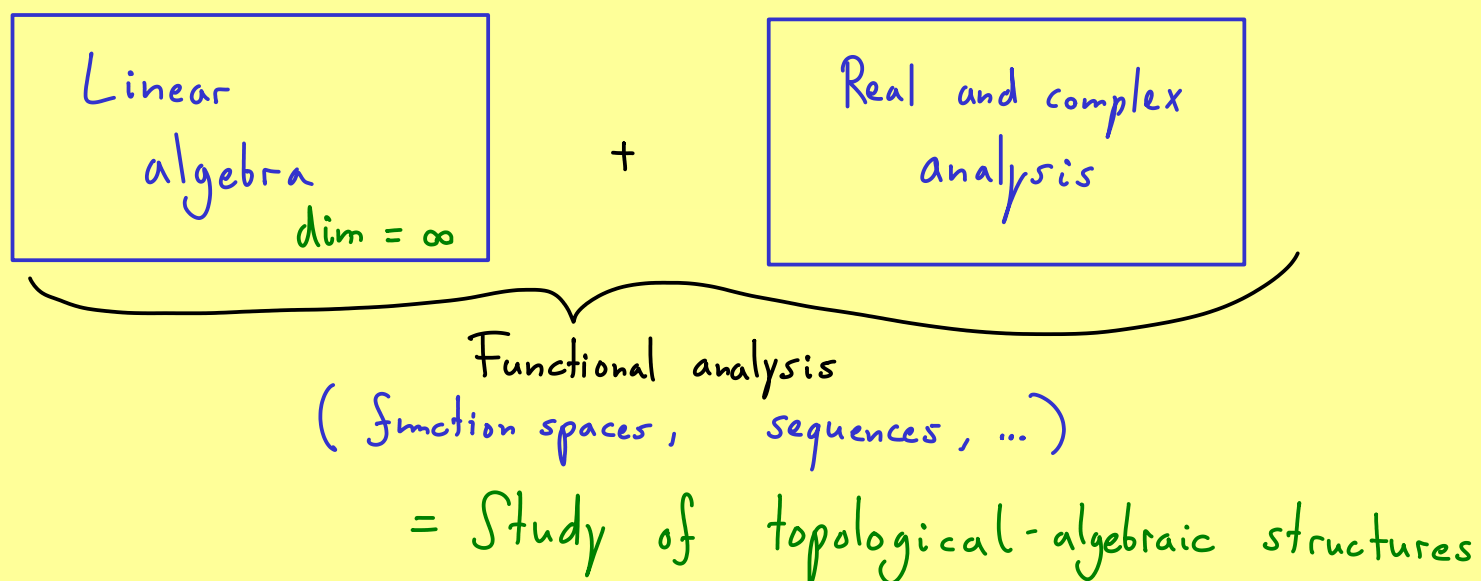




Introduction and Metric Spaces

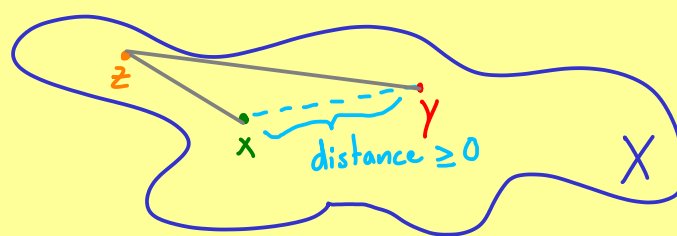
The Bright Side of Mathematics

Functional analysis - part 1



Metric spaces

X set



a metric: $d: X \times X \rightarrow [0, \infty)$

$$(1) \quad d(x, y) = 0 \iff x = y$$

$$(2) \quad d(x, y) = d(y, x)$$

$$(3) \quad d(x, y) \leq d(x, z) + d(z, y) \quad (\text{triangle inequality})$$

