

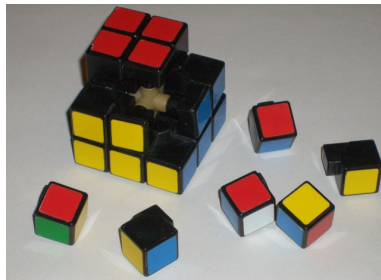
# Il cubo di Rubik

E. Paolini

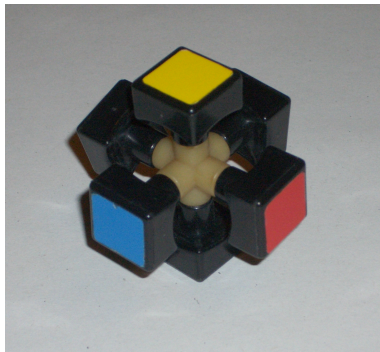
Dip. Mat. "U. Dini", Univ. Firenze

Firenze, 27 ottobre 2008

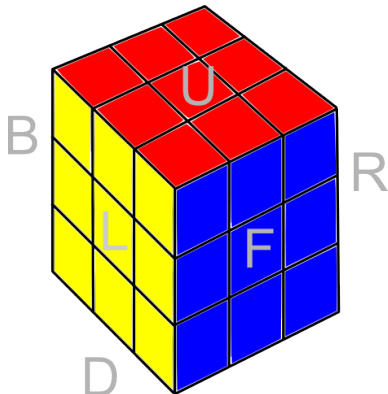
## Il cubo



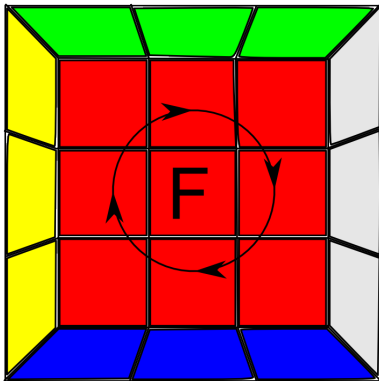
## le facce centrali



# I generatori

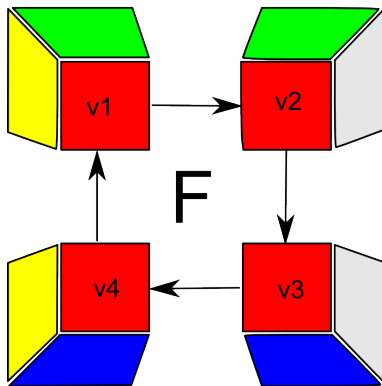


# Primo invariante



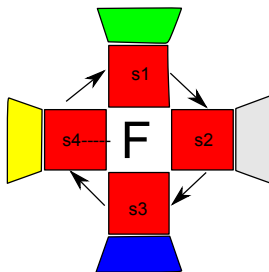
...

# Primo invariante

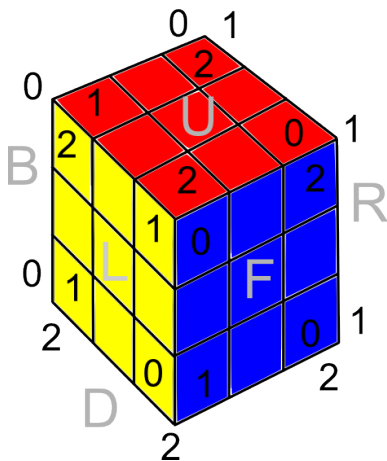


...

# Primo invariante



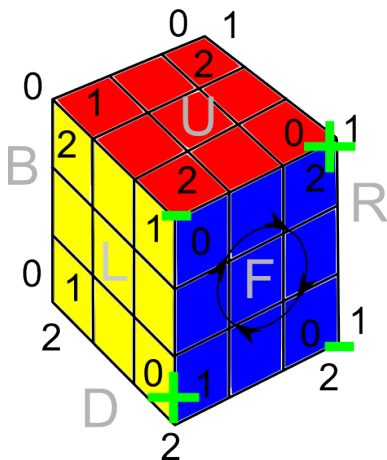
## Secondo invariante



...

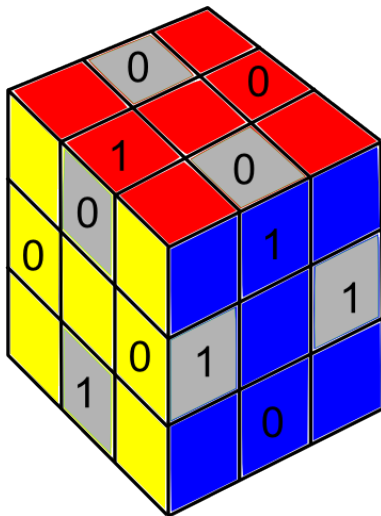


## Secondo invariante

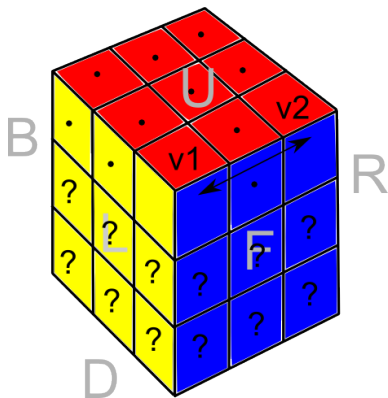




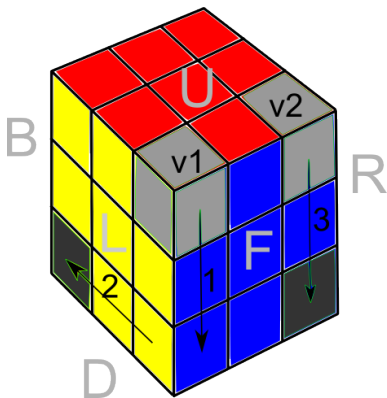
## Terzo invariante



## Scambio tramite coniugio

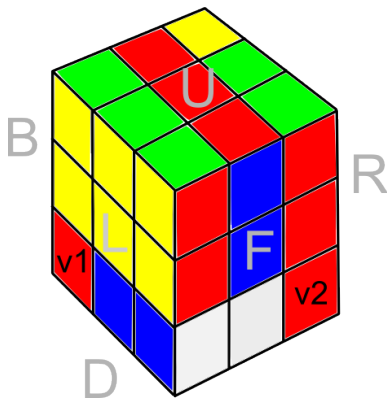


## Scambio tramite coniugio

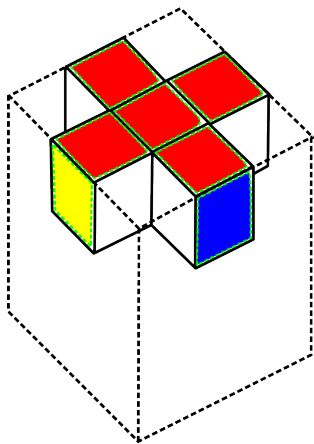


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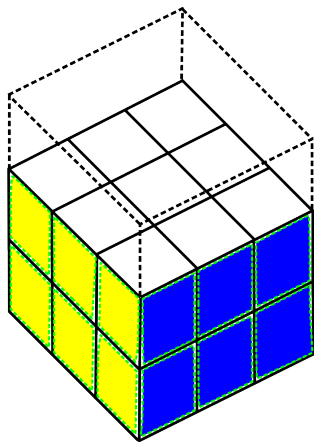
## Scambio tramite coniugio



## commutazione

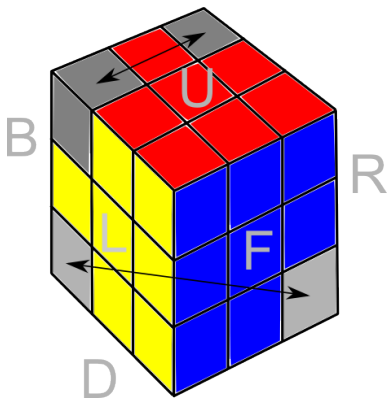


A



B

# Coniugio



...



# Coniugio

