



# The Anatomy of a Rubik's cube



• How many sides are there?

The 6 centerpieces are locked in their place

• Let's name the 6 sides: R, L, U, D, F, B

- You can rotate each of the 6 sides either clockwise or counterclockwise (based on the eyes that look directly at that side)

• Clockwise rotation: R, L, U, D, F, B



• Counterclockwise rotation:  $R'$ ,  $L'$ ,  $U'$ ,  $D'$ ,  $F'$ ,  $B'$





• How many pieces are there in the cube?

- 266 (top layer: 9, bottom layer: 9, middle layer: 8)

• *Enterpieces: 6*

• Corner pieces:





• Edgewise pieces:



1

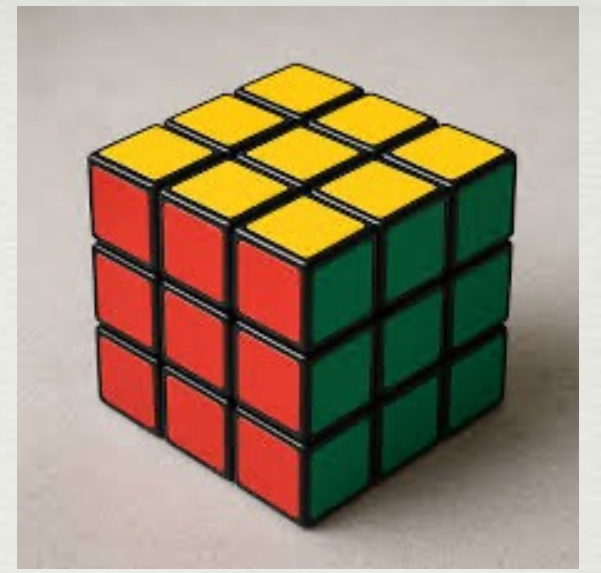
2

Sides





# The Anatomy of a Rubik's cube



## Sides

- How many sides are there?
- The 6 centerpieces are locked in their places
- Let's name the 6 sides: R, L, U, D, F, B
- You can rotate each of the 6 sides either clockwise or counterclockwise (based on the eyes that look directly at that side)
- Clockwise rotation: R, L, U, D, F, B
- Counterclockwise rotation: R', L', U', D', F', B'

## Pieces

- How many pieces are there in the cube?
- 26 (top layer: 9, bottom layer: 9, middle layer: 8)
- Centerpieces: 6
- Corner pieces:
  - 8
- Edge pieces:
  - 12



# Tinker a bit with your cube



Don't scramble your cube yet

- Practice these moves: R, L, U, D, F, B and their twins R', L', U', D', F', B'
- But only 1 move at a time, and undo it immediately so that your cube remains solved the whole time
- Always hold the cube this way so you don't get disoriented:
  - Yellow centerpiece faces up and white centerpiece faces down
- And try to remember which centerpiece is facing you
- Notice how the centerpiece never moves?