Rubik's 2x2x2 Pocket Cube

*First patented by Rubik 1983, other patents cover different internal mechanisms.*
(plastic, 1.5 inches)

**Rubik 2x2x2 Three Step Solution**

**Notation:** L (left), R (right), F (front), B (back), U (up), and D (down)
for 90 degree clockwise rotations of that face; - means counterclockwise.

**1.** Solve the down layer.

**2.** Put up the layer corners in correct locations (but possibly rotated incorrectly):
   Use the following sequence exchange two corners:
   
   UFL <-> UFR:  \((F\ U)\ (F-\ U-)\ (L-\ U-\ L)\)
   
   *Note:* A quick way to do UBL <-> UFR is to precede this by \(L\) and skip the final \(L\).

**3.** Fix the up layer so all corners are rotated correctly:
   Position the cube so the up front right corner is not correct and repeat these two steps until all up corners are correct:
   
   A. Repeat until the up front right corner is correct:
   \[(R-\ D-)\ (R\ D)\]

   B. Rotate the up layer so the up front right corner is not correct.

*Note:* During Step 3, the down layer will be mixed up, but it will become correct again at the end. Be sure to do all four moves of Step 3A each time; it is easy to forget the final \(D\) when you see the correct color on top.

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