

Romanian Calendar Cube Design

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WebSites	http://www.mementoslangues.fr/	http://www.randelshofer.ch/

Introduction

A **Romanian Calendar Cube** is a 3x3x3 **Rubik's Cube** used as a **Romanian Calendar**. There are **Virtual Cubes** that can be *virtually* rotated and twisted on a computer screen and **Real Cubes** that can only be *physically* rotated and twisted by hand. A **Texture** is laid down on a Virtual Cube whereas real **Stickers** are stuck down on a Real Cube. A Romanian Calendar Cube is designed by placing letters, numerals and words on a texture which is then laid down on a Virtual Cube (see <http://www.randelshofer.ch/> for more details). The date of the day can be displayed on a *selected* Cube Face by rotating and twisting some parts of the Cube. When this has been achieved, we say that the Cube has been *solved*.

Romanian Language – Useful Links

http://en.wikipedia.org/wiki/Romanian_language http://wikitravel.org/en/Romanian_phrasebook

The date of the day can be displayed on a *selected* Cube Face by rotating and twisting some parts of the Cube. When this has been achieved, we say that the Cube has been *solved*. The following example shows the *initial* state of the Cube (Monday, January 01).

Virtual Romanian Calendar Cube

Romanian Calendar Cube Original design 2008 by André Boulouard and Walter Randelshofer Copyright © 2008 André Boulouard Walter Randelshofer Werner Randelshofer All rights reserved.	
Romanian Calendar Cube Texture	Virtual Romanian Calendar Cube

Design Particularities

Days of the month numbered between '0' and '9' are displayed on the bottom layer without a leading '0'.

Romanian Calendar Cube Design

Romanian Calendar

Romanian Calendar				
Months			Weekdays	
English	Romanian		English	Romanian
January	<u>I</u> ANuarie	Ianuarie	Monday	Luni
February	<u>F</u> EBruarie	Februarie	Tuesday	Mărti
March	<u>M</u> ARtie	Martie	Wednesday	Miercuri
April	<u>A</u> PRilie	Aprilie	Thursday	Joi
May	<u>M</u> AI	Mai	Friday	Vineri
June	<u>I</u> UNie	Iunie	Saturday	Sâmbătă
July	<u>I</u> ULie	Iulie	Sunday	Duminică
August	<u>A</u> UGust	August		
September	<u>S</u> EPtembrie	Septembrie		
October	<u>O</u> CTobrie	Octobrie		
November	<u>N</u> OIembrie	Noiembrie		
December	<u>D</u> ECembrie	Decembrie		
8 letters on Middle Left edge cubes			I F M A S O N D	
6 letters on Middle Center cubes			A E P U C O	
9 letters on Middle Right edge cubes			N B R I L G P T C	
Letter 'I' can be used either Middle Left or Middle Right				

Cube Layout

Weekdays are displayed on **Top Layer**, months on **Middle Layer** and days of the month on **Bottom Layer**.

Top Layer Layout

Top Layer: Weekdays								
Miercuri (Wednesday)			Sâmbătă (Saturday)			Duminică (Sunday)		
Miercu	ri		Sâm	bătă		Dumini	că	

Weekdays and blanks on the **Top Layer** are sorted out as follows:

- 1- 7 **Top Left** weekday parts: Lun, Marț, Miercu, Jo, Vine, Sâmb, Dumini
- 2- 4 **Top Center** weekdays parts and 1 blank: i, ri, băta, că
- 3- 2 **Top Right** blanks parts: blank1_**TR***, blank2_**TR***

Weekdays and blanks are now combined on corner and edge cubes:

- 1- 3 **Top Left** corner cubes: (Lun,Marț,Miercu), (Jo,Vine,blank1_**TR**), (Sâmb,Dumini,blank2_**TR**)
- 2- 2 **Top Center** edge cubes: (i,ri), (băta,că)

* This ensures that there is always 1 blank available on a **Top Right** corner cube.

So, now there are 5 corner and 10 edge cubes left that can be used for the 2 remaining layers.

Middle Layer Layout



Months on the **Middle Layer** are sorted out as follows:

- 1- 8 **Middle Left** letters on edge cubes: I, F, M, A, S, O, N, D
- 2- 6 **Middle Center** letters on center cubes: A, E, P, U, C, O
- 3- 9 **Middle Right** letters on edge cubes: N, B, R, I, L, G, P, T, C

Letters are now combined on edge cubes:

- 1- 4 **Middle Left** edge cubes: (I, F), (M,A), (S,O), (N,D)
- 2- 4 **Middle Right** edge cubes: (N,B), (R,L), (G,P), (T,C)

Note 1: Letter 'I' is common to both right and left sides (MAI, IUN, IUL, NOI)

So, now there are 5 corner and 2 edge cubes left that can be used for the Bottom Layer.

Bottom Layer Layout



Numbers and blanks on the **Bottom Layer** are sorted out as follows:

- 1- 2 **Bottom Left** blanks on corner cubes: blank1_**BL****, blank2_**BL****
- 2- 3 **Bottom Center** numbers and 1 blank on edge cubes: 1, 2, 3, blank_**BC**
- 3- 10 **Bottom Right** numbers on corner cubes: 1,2,3,4,5,6,7,8,9,0

Numbers are now combined on corner and edge cubes:

- 1- 2 **Bottom Center** edge cubes: (1,2), (3,blank_**BC**)
- 2- 4 **Bottom Right** corner cubes: (1,2,3), (4,5,blank1_**BL****), (6,7,8), (9,0,blank2_**BL****)

** This ensures that there is always 1 blank available on a **Bottom Left** corner cube.

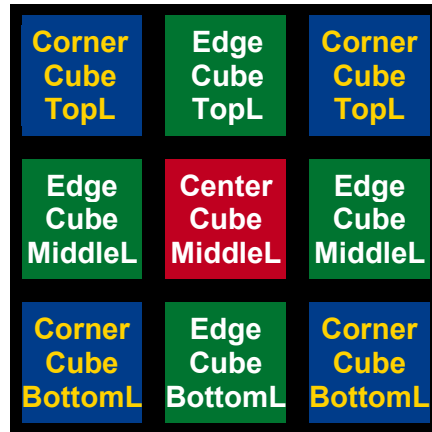
Romanian Calendar Cube – Layout Table

Reading from Left to Right

Top L eft – Corner cubes	Top C enter – Edge cubes	Top R ight – Corner cubes
Lun, Marț, Miercu, Jo, Vine, Sâmb, Dumini	i, ri, băță, că	blanks
Middle L eft – Edge cubes	Middle C enter – Center cubes	Middle R ight – Edge cubes
I , F, M, A, S, O, N, D	A, E, P, U, C, O	N, B, R, I , L, G, P, T, C
Bottom L eft – Corner cubes	Bottom C enter – Edge cubes	Bottom R ight – Corner cubes
blanks	1, 2, 3, blank	1,2,3,4,5,6,7,8,9,0

Terminology

In a 3x3x3 **Rubik's Cube**, there are 8 *Corner Cubes*, 12 *Edge Cubes*, 6 *Center Cubes* and 6 *Cube Faces*. There are also 4 Corner Cube faces, 4 Edge Cube faces and 1 Center Cube face *per Cube Face*, as shown below.



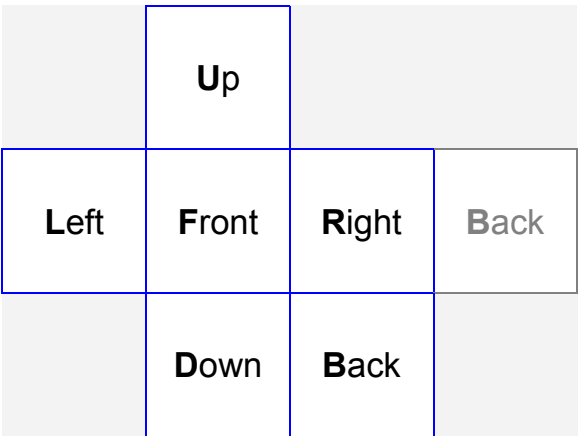
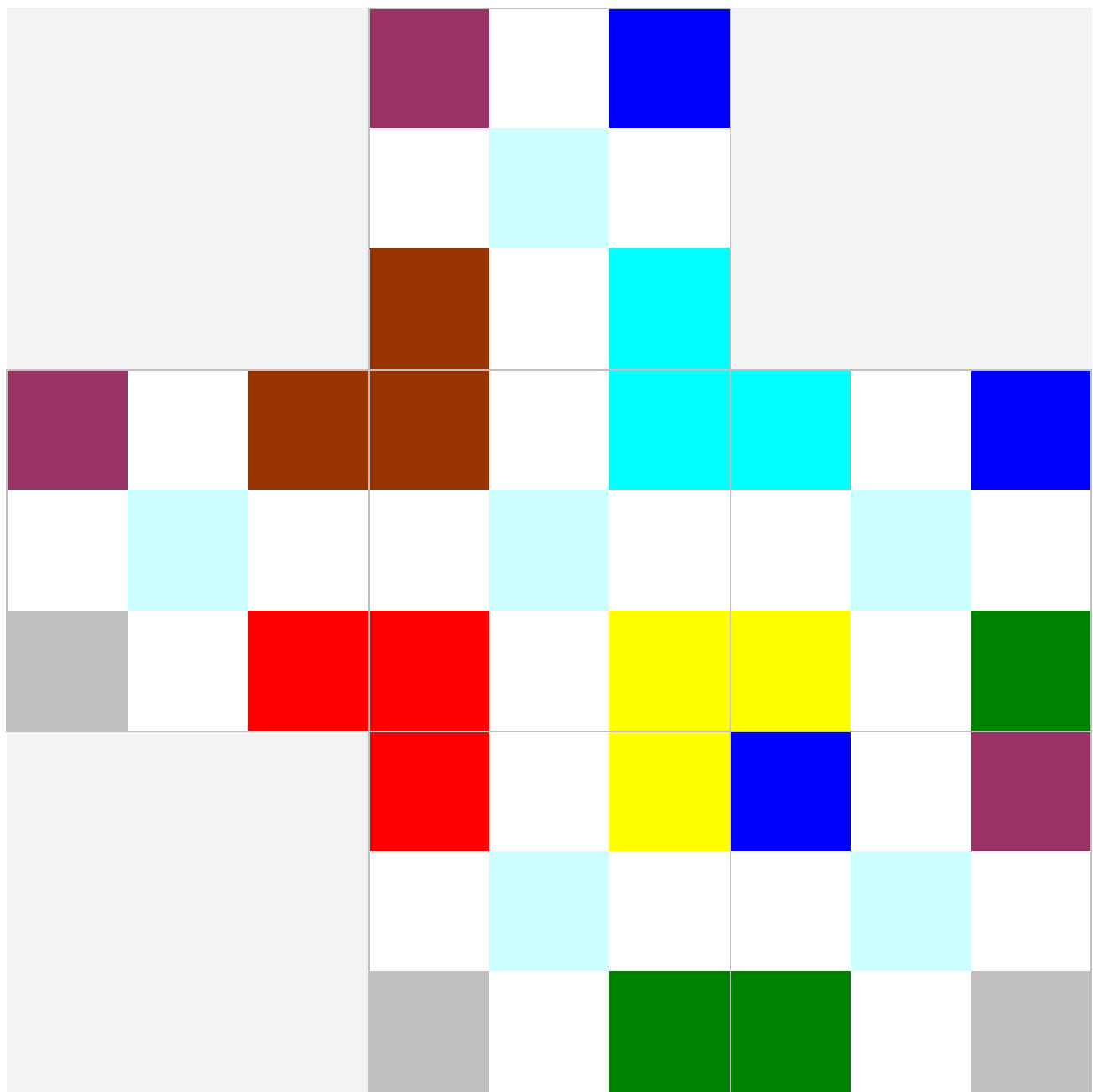
There are 1 face per Center Cube, 2 faces per Edge Cube and 3 faces per Corner Cube.

There are also 3 horizontal *Layers* called *Top*, *Middle* and *Bottom Layers*.

Cube Lexicon		
English	Français	Deutsch
Cube	Cube	Würfel
cube, cube	cube, petit cube	Würfelteil, Teil des Würfels
face	face	Seite, Seitenfläche
front face	face avant	vordere Seite, vorne
back face	face arrière	hintere Seite, hinten
left face	face gauche	linke Seite, links
right face	face droite	rechte Seite, rechts
top face	face supérieure	obere Seite, oben
bottom face	face inférieure	untere Seite, unten
sticker	étiquette (autocollante), plaquette	Kleber, Farbkleber
tile	tuile, plaquette	Plättchen, Farbplättchen
center cube, center	cube central, centre	Mittelwürfel, Mittelstein, Mitte
edge cube, edge	cube-arête, arête	Kantenwürfel, Kantenstein, Kante
corner cube, corner	cube de coin, coin	Eckwürfel, Eckstein, Ecke
layer	couronne	Schicht, Scheibe
top layer	couronne supérieure	obere Schicht, obere Scheibe
middle layer	couronne intermédiaire	mittlere Schicht, mittlere Scheibe, Mittelschicht, Mittelscheibe
bottom layer	couronne inférieure	untere Schicht, untere Scheibe
orientation, direction	orientation	Orientierung
to solve	résoudre	lösen, zusammen drehen
to twist	pivoter	drehen
to rotate	tourner, effectuer une rotation	drehen
clockwise	dans le sens horaire	im Uhrzeigersinn
anticlockwise, counter-clockwise	dans le sens anti-horaire	im Gegenurzeigersinn

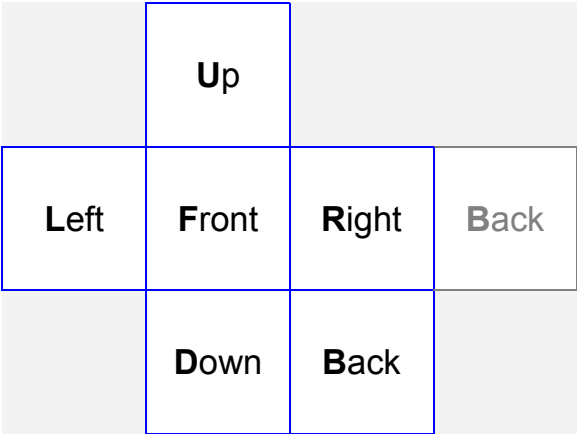
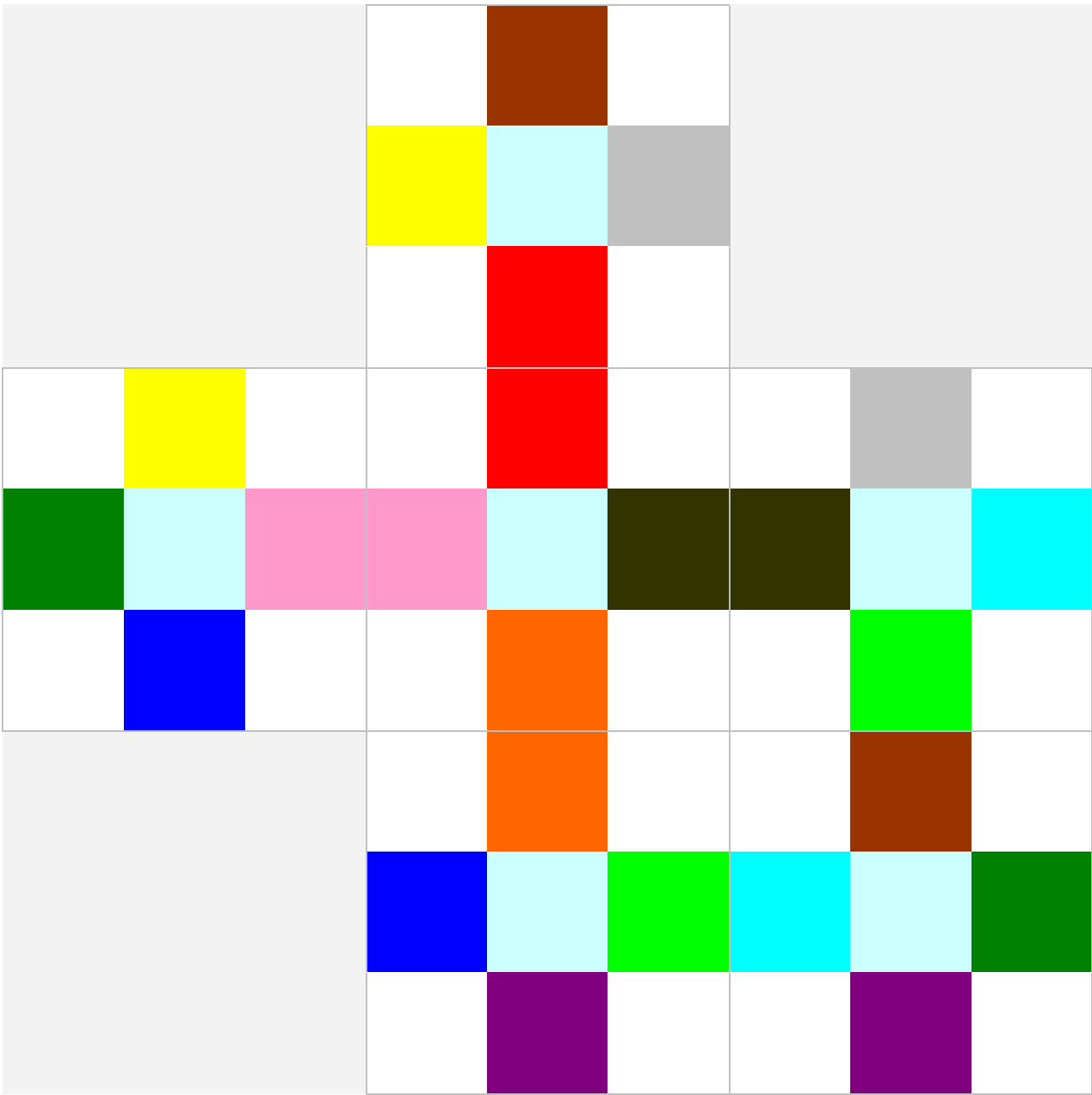
Corner Cubes Final Check

There are 8 Corner Cubes and 3 faces per Corner Cube. In the diagram below, each Corner Cube is displayed in 8 different colors and with the same color applied to each of its 3 faces. This diagram can be used as a convenient *visual aid* to check Design Rules (DRC).



Edge Cubes Final Check

There are 12 Edge Cubes and 2 faces per Edge Cube. In the diagram below, each Edge Cube is displayed in 12 different colors and with the same color applied to each of its 2 faces. This diagram can be used as a convenient *visual aid* to check Design Rules (DRC).



Texture Template

This is a texture template that can be printed out and used for writing down numbers and letters by hand *prior to* texture design. All is needed are pencil, rubber...and time.

