



Le codage numérique d'images

Science informatique débranchée

1886

Georges Seurat



Un dimanche après-midi à l'île de la Grande Jatte



Bi-colorions

Dessin binaire

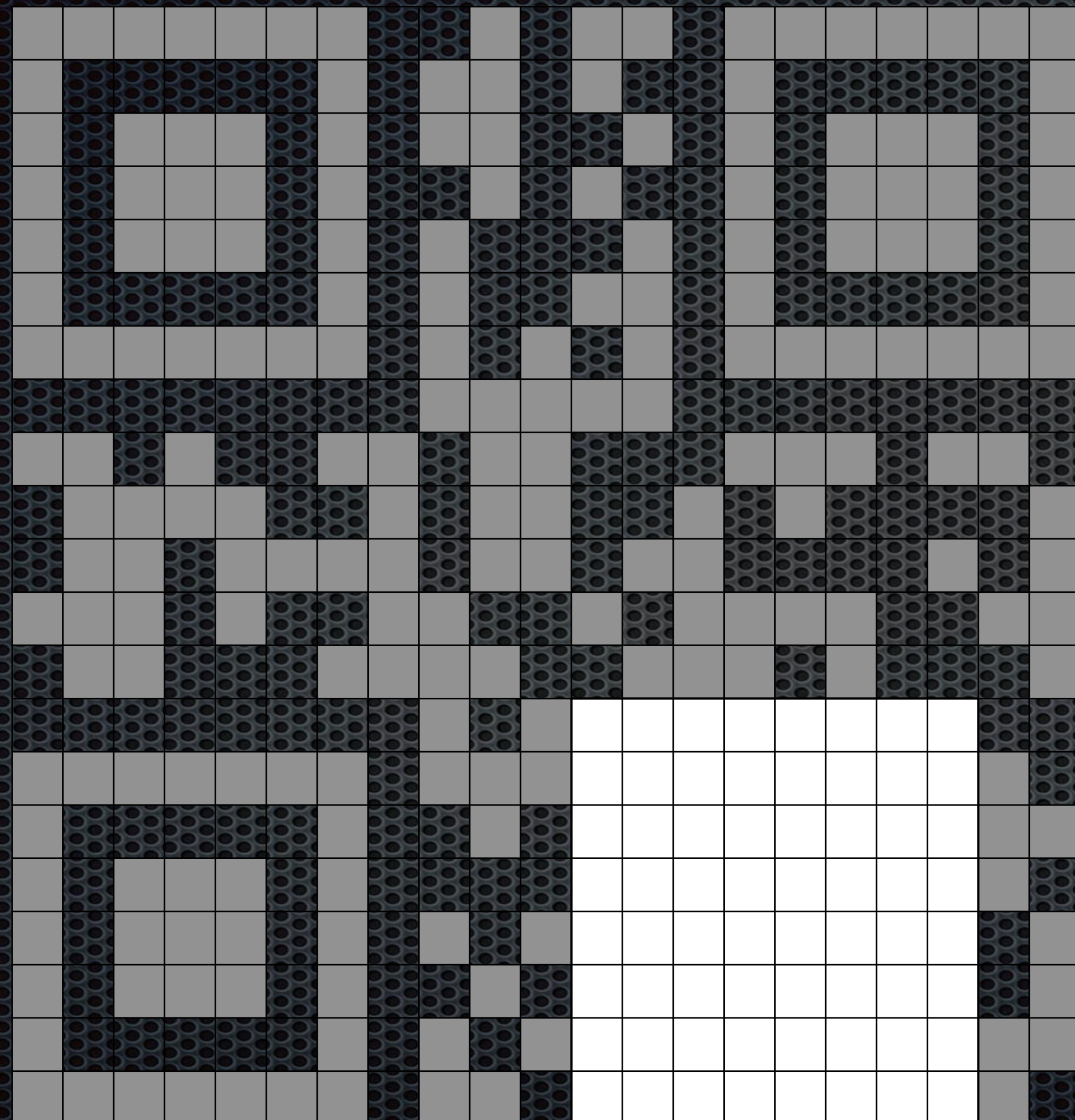
The screenshot shows a Scratch project titled "Dessin binaire". It features an 8x8 grid of squares. The grid contains a pattern of black squares: (row, column) pairs (1,8), (2,7), (3,6), (4,5), (5,4), (6,3), (7,2), and (8,1). To the right of the grid is a list titled "code Binaire" with 8 rows, each containing a number in an orange box: 1, 2, 4, 8, 16, 32, 64, and 128. At the bottom, there are sliders for "tailleX" and "tailleY", both set to 8. A small icon of a square with a diagonal line is visible between the sliders. To the right of the sliders, it says "+ longueur 8 =".

	code Binaire
1	1
2	2
3	4
4	8
5	16
6	32
7	64
8	128

tailleX 8 tailleY 8 + longueur 8 =

<https://scratch.mit.edu/projects/423994353/fullscreen/>

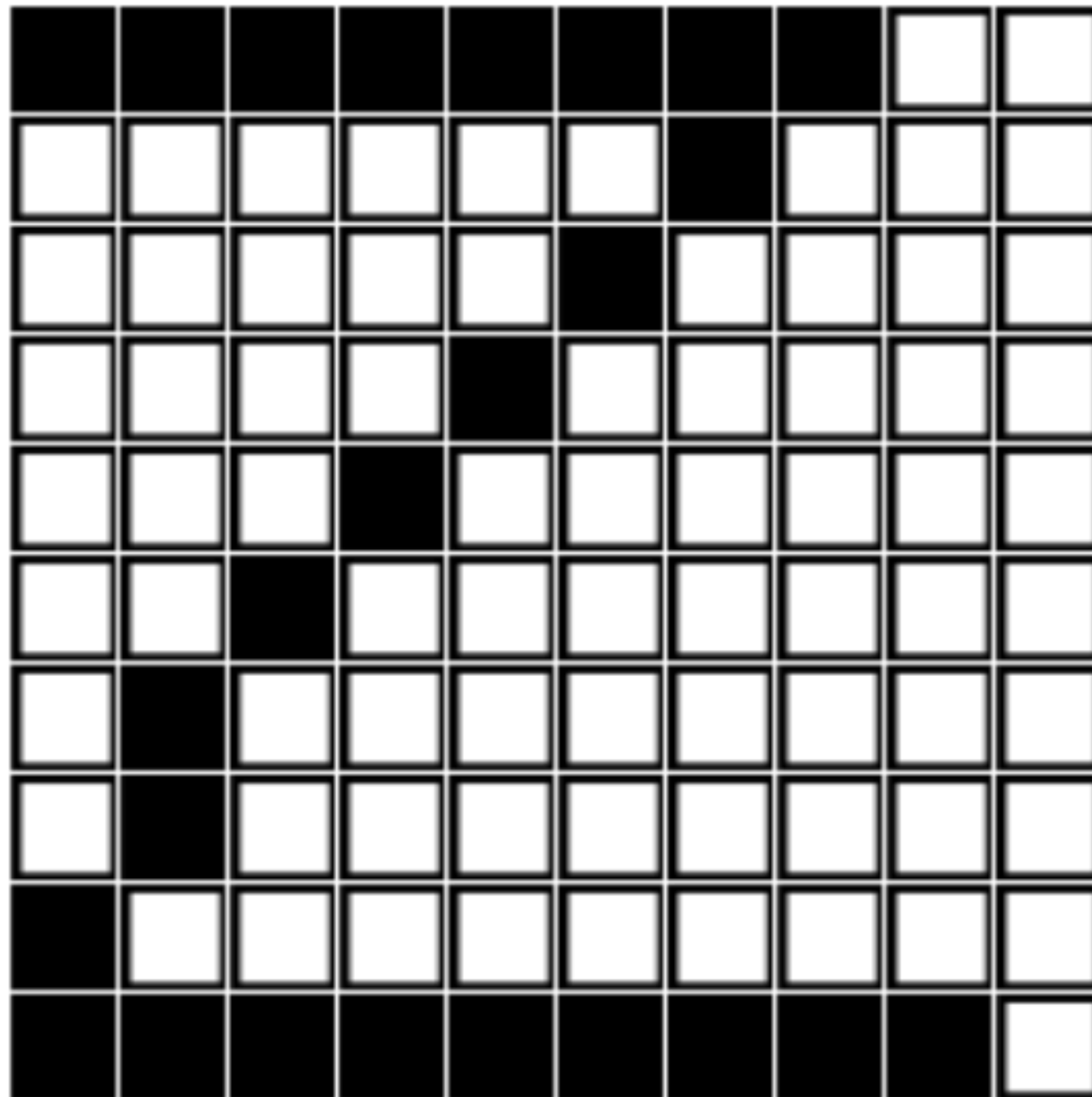
À vous



Savoir
faire des
additions

<https://whiteboard.fi>

Compressions



8:2

0:6:1:3

0:5:1:4

0:4:1:5

0:3:1:6

0:2:1:7

0:1:1:8

0:1:1:8

1:9

9:1



À vous

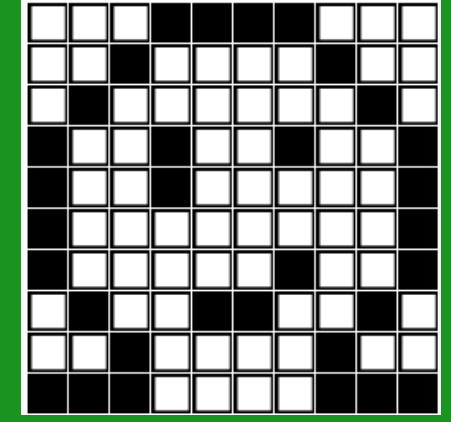
à vous de décoder - Question 4

0:3:4:3										
0:2:1:4:1:2										
0:1:1:6:1:1										
1:2:1:2:1:2:1										
1:2:1:5:1										
1:8:1										
1:5:1:2:1										
0:1:1:2:2:2:1:1										
0:2:1:4:1:2										
3:4:3										

Savoir
compter

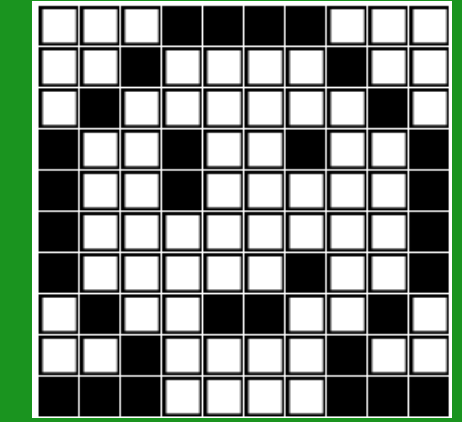
<https://whiteboard.fi>

Appliquons



- Quel est la taille de ce fichier ?

Appliquons



- Quel est la taille de ce fichier ?

0:3:4:3

0:2:1:4:1:2

0:1:1:6:1:1

1:2:1:2:1:2:1

1:2:1:5:1

1:8:1

1:5:1:2:1

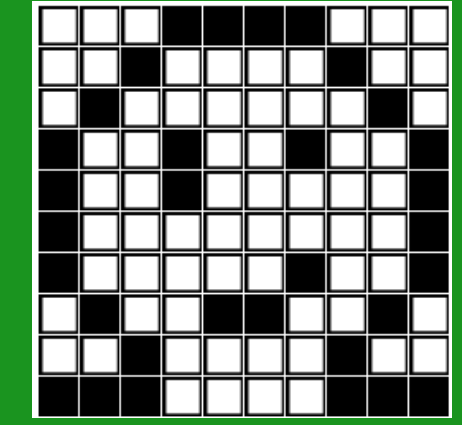
0:1:1:2:2:2:1:1

0:2:1:4:1:2

3:4:3

50

Appliquons



- Quel est la taille de ce fichier ?
- Quel dessin prendrait le moins de place ?

0:3:4:3

0:2:1:4:1:2

0:1:1:6:1:1

1:2:1:2:1:2:1

1:2:1:5:1

1:8:1

1:5:1:2:1

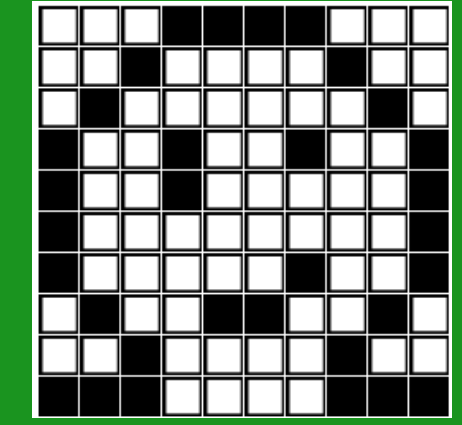
0:1:1:2:2:2:1:1

0:2:1:4:1:2

3:4:3

50

Appliquons



- Quel est la taille de ce fichier ?
- Quel dessin prendrait le moins de place ?

0:3:4:3

0:2:1:4:

0:1:1:6:

1:2:1:2:

1:2:1:5:

1:8:1

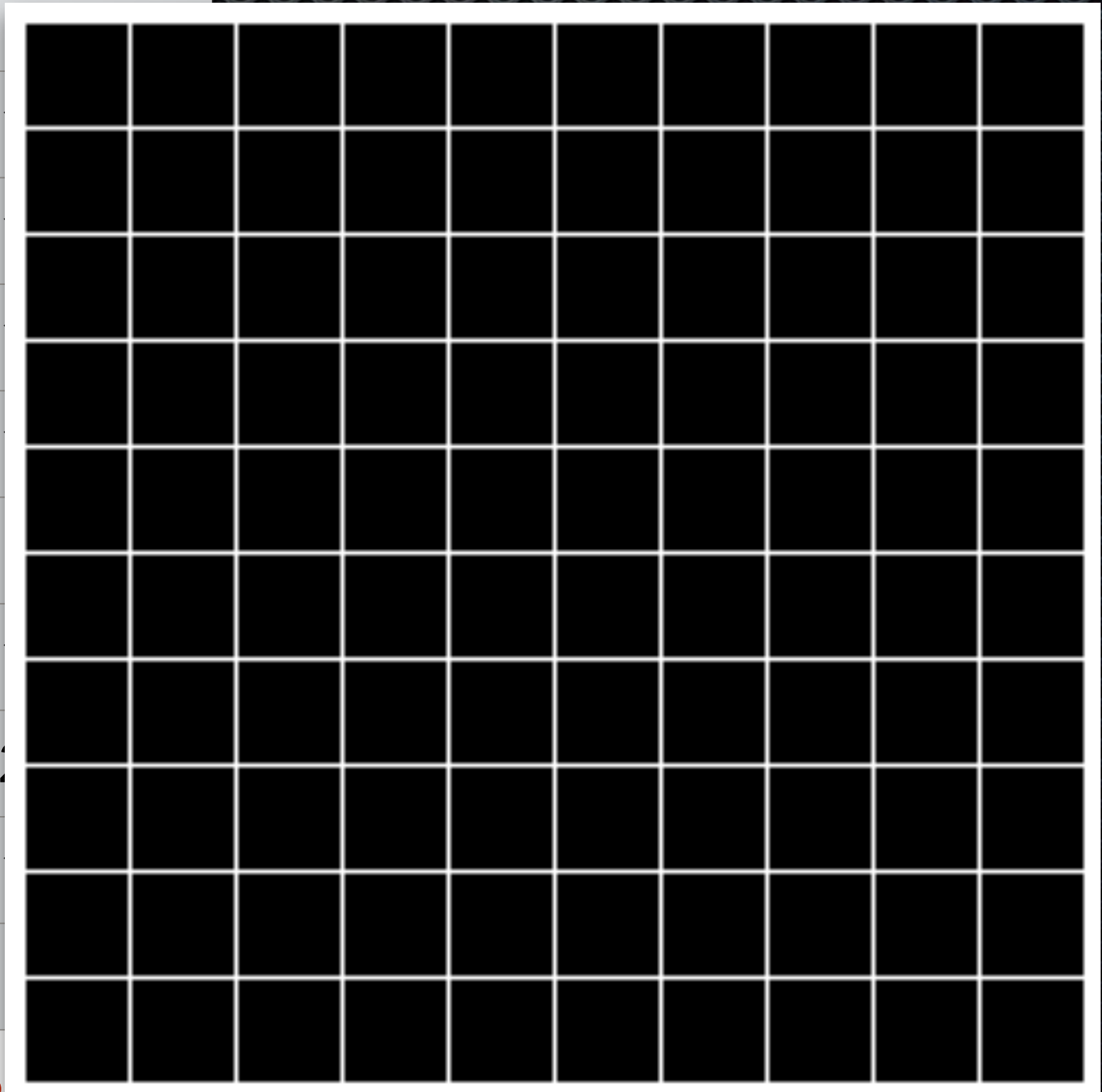
1:5:1:2:

0:1:1:2:

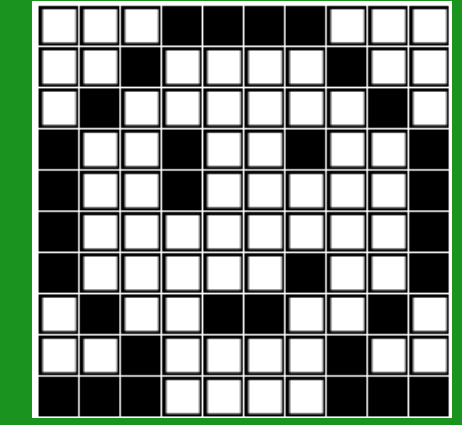
0:2:1:4:

3:4:3

5



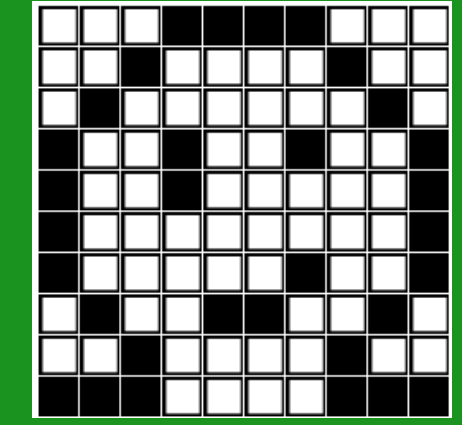
Appliquons



- Quel est la taille de ce fichier ?
- Quel dessin prendrait le moins de place ?

0:3:4:3	10	
0:2:1:4:	10	
0:1:1:6:	10	
1:2:1:2:	10	
1:2:1:5:	10	
1:8:1	10	
1:5:1:2:	10	
0:1:1:2:	10	
0:2:1:4:	10	
3:4:3	10	
5	10	

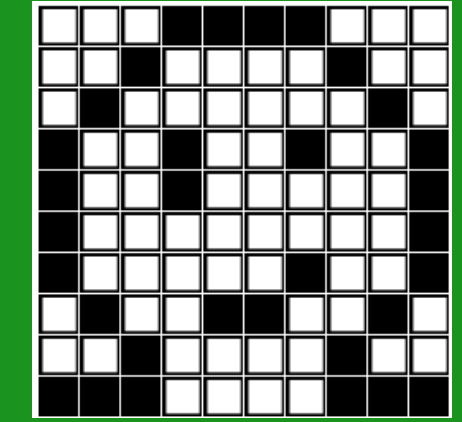
Appliquons



- Quel est la taille de ce fichier ?
- Quel dessin prendrait le moins de place ?
- Quel dessin prendrait le plus de place ?

0:3:4:3	10	
0:2:1:4:	10	
0:1:1:6:	10	
1:2:1:2:	10	
1:2:1:5:	10	
1:8:1	10	
1:5:1:2:	10	
0:1:1:2:	10	
0:2:1:4:	10	
3:4:3	10	
5	10	

Appliquons

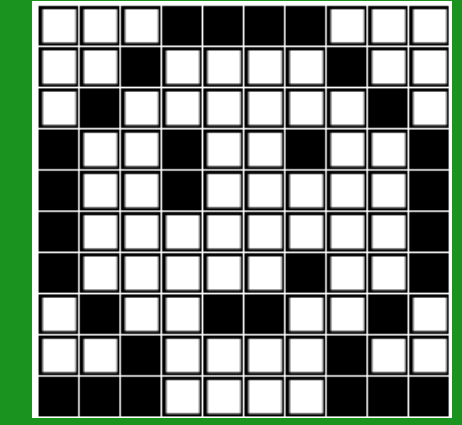


- Quel est la taille de ce fichier ?
- Quel dessin prendrait le moins de place ?
- Quel dessin prendrait le plus de place ?

0:3:4:3	
0:2:1:4:	
0:1:1:6:	
1:2:1:2:	
1:2:1:5:	
1:8:1	
1:5:1:2:	
0:1:1:2:	
0:2:1:4:	
3:4:3	

5

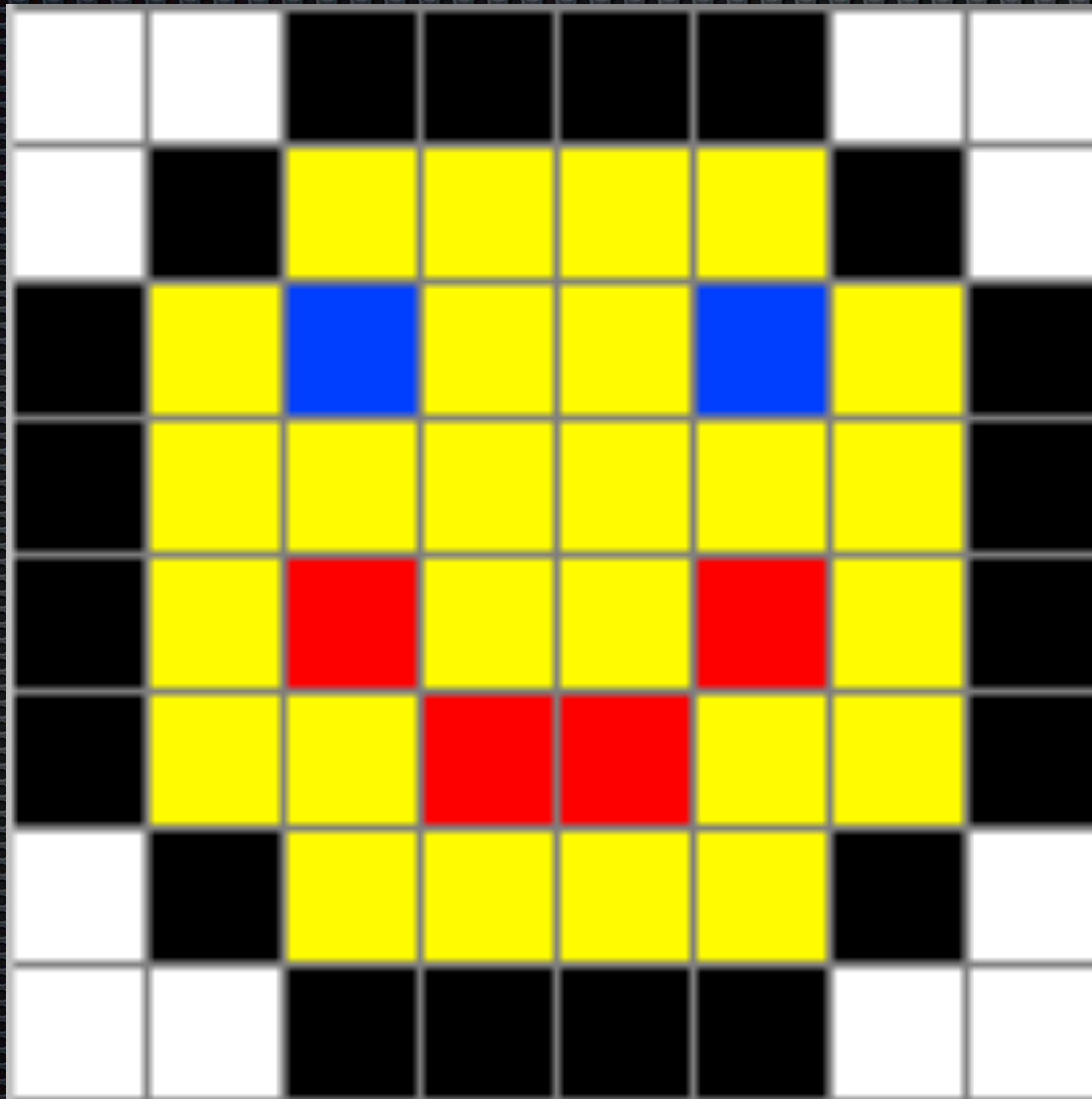
Appliquons



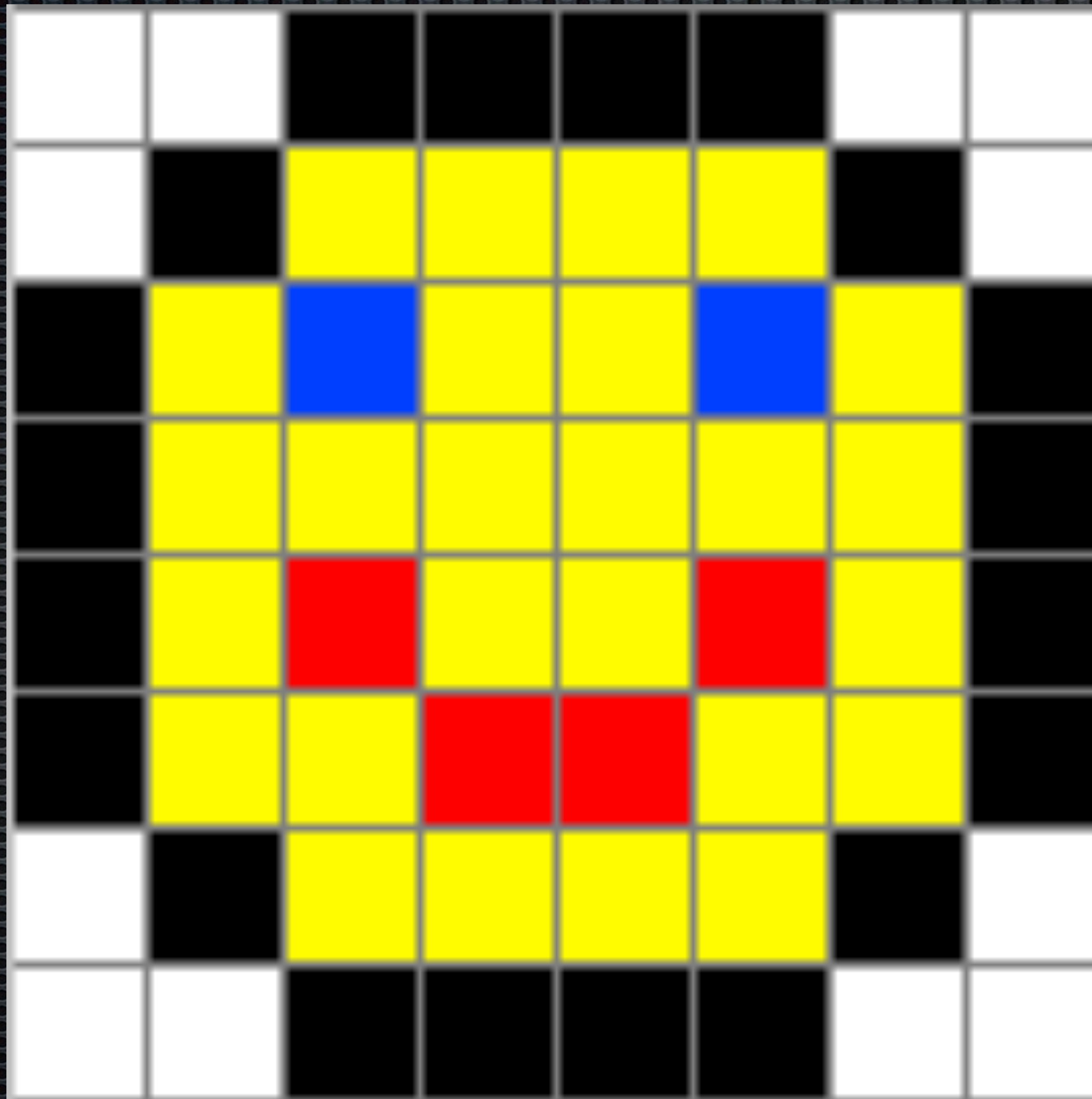
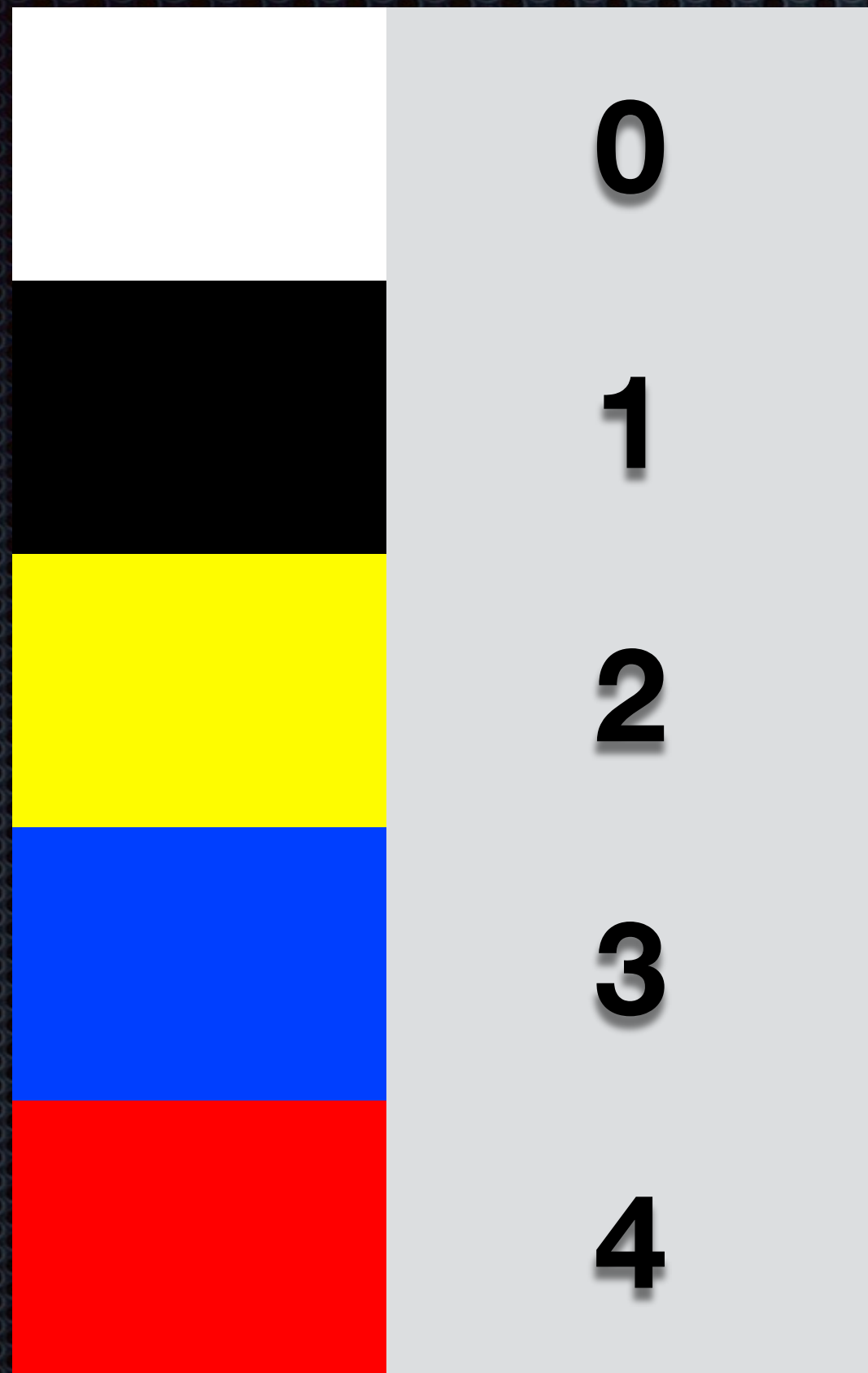
- Quel est la taille de ce fichier ?
- Quel dessin prendrait le moins de place ?
- Quel dessin prendrait le plus de place ?

0:3:4:3		0,1,1,1,1,1,1,1,1,1
0:2:1:4:		0,1,1,1,1,1,1,1,1,1
0:1:1:6:		0,1,1,1,1,1,1,1,1,1
1:2:1:2:		0,1,1,1,1,1,1,1,1,1
1:2:1:5:		0,1,1,1,1,1,1,1,1,1
1:8:1		0,1,1,1,1,1,1,1,1,1
1:5:1:2:		0,1,1,1,1,1,1,1,1,1
0:1:1:2:		0,1,1,1,1,1,1,1,1,1
0:2:1:4:		0,1,1,1,1,1,1,1,1,1
3:4:3		0,1,1,1,1,1,1,1,1,1
5		110

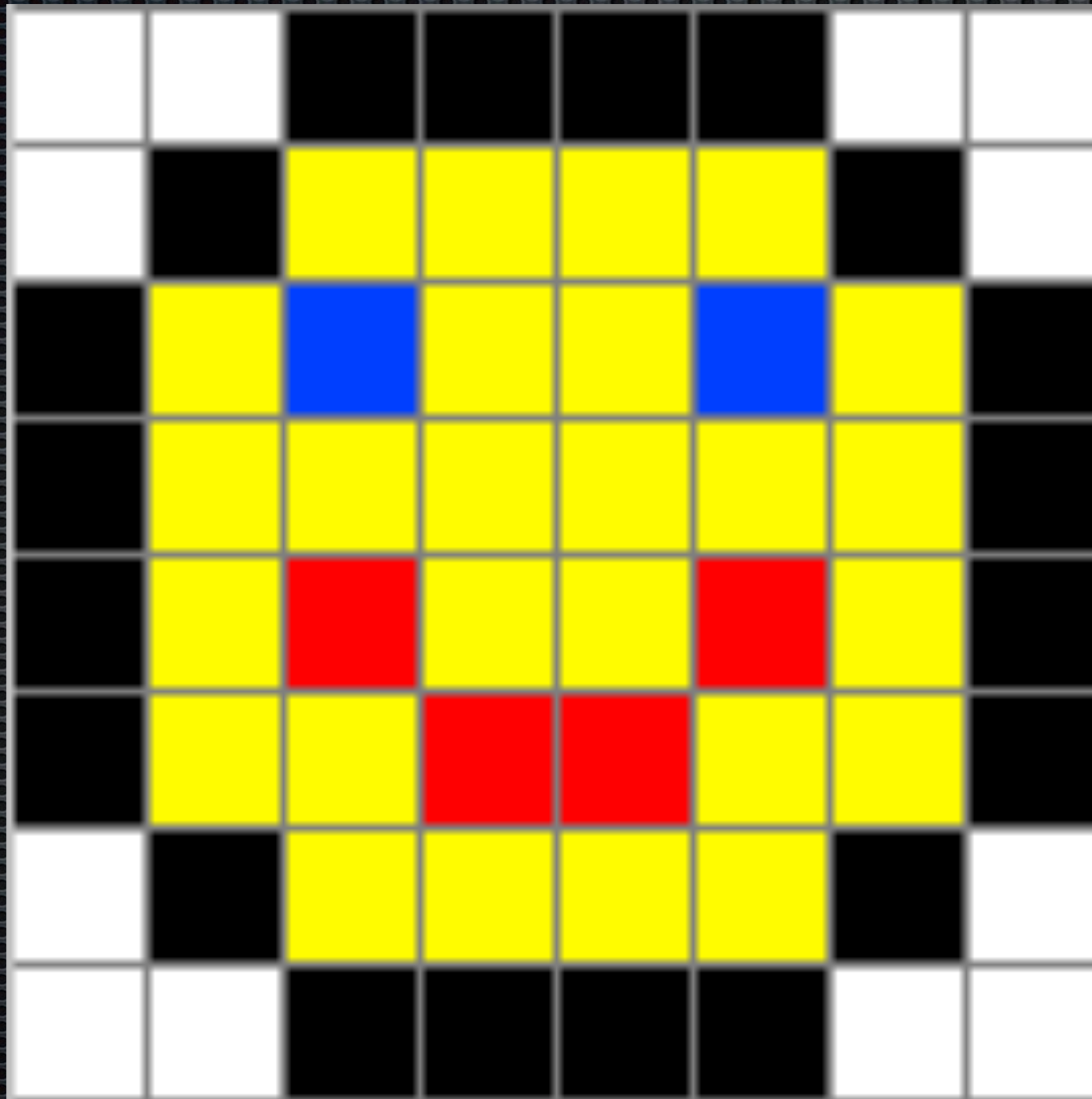
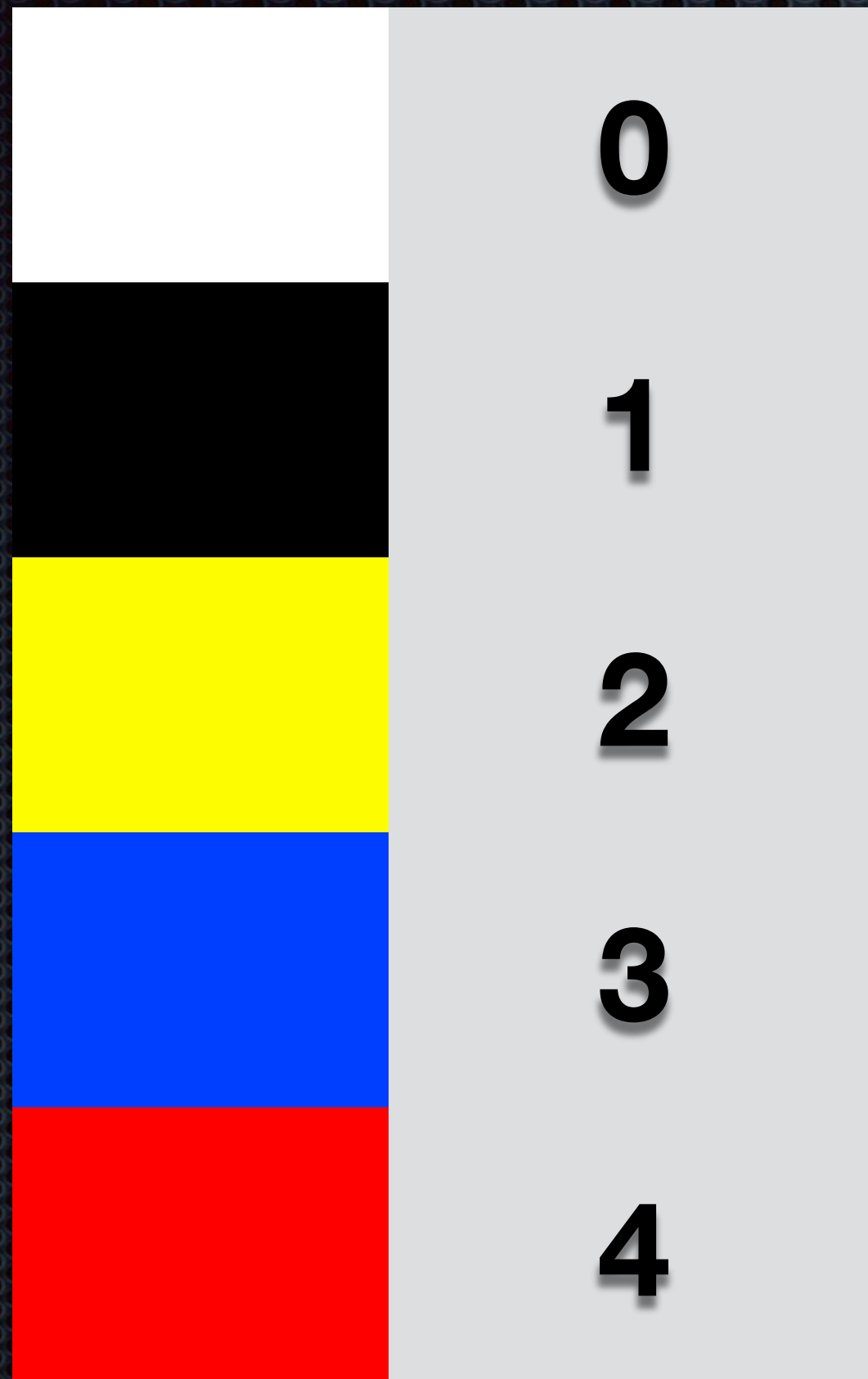
Colorisons



Colorisons

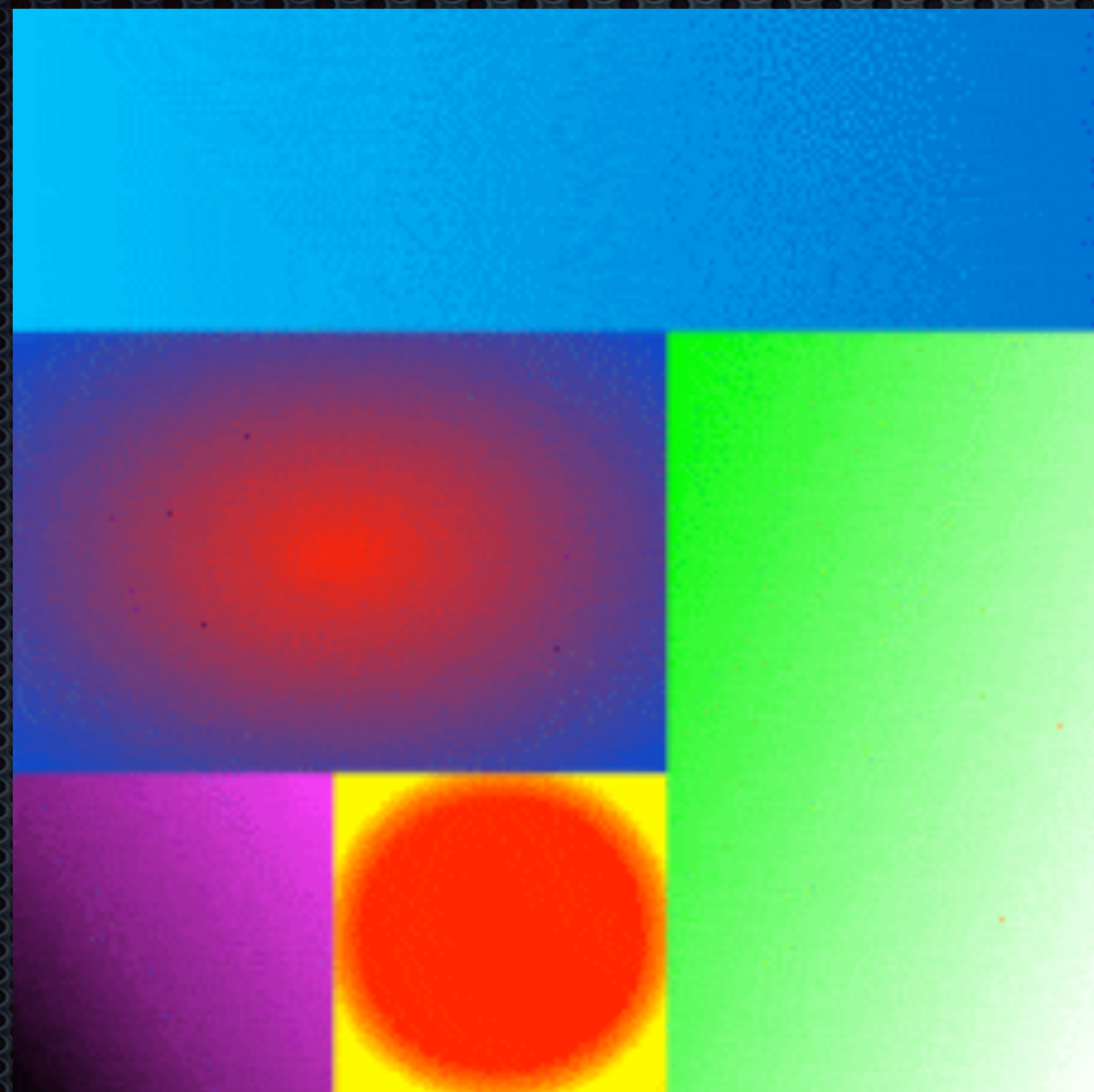


Colorisons



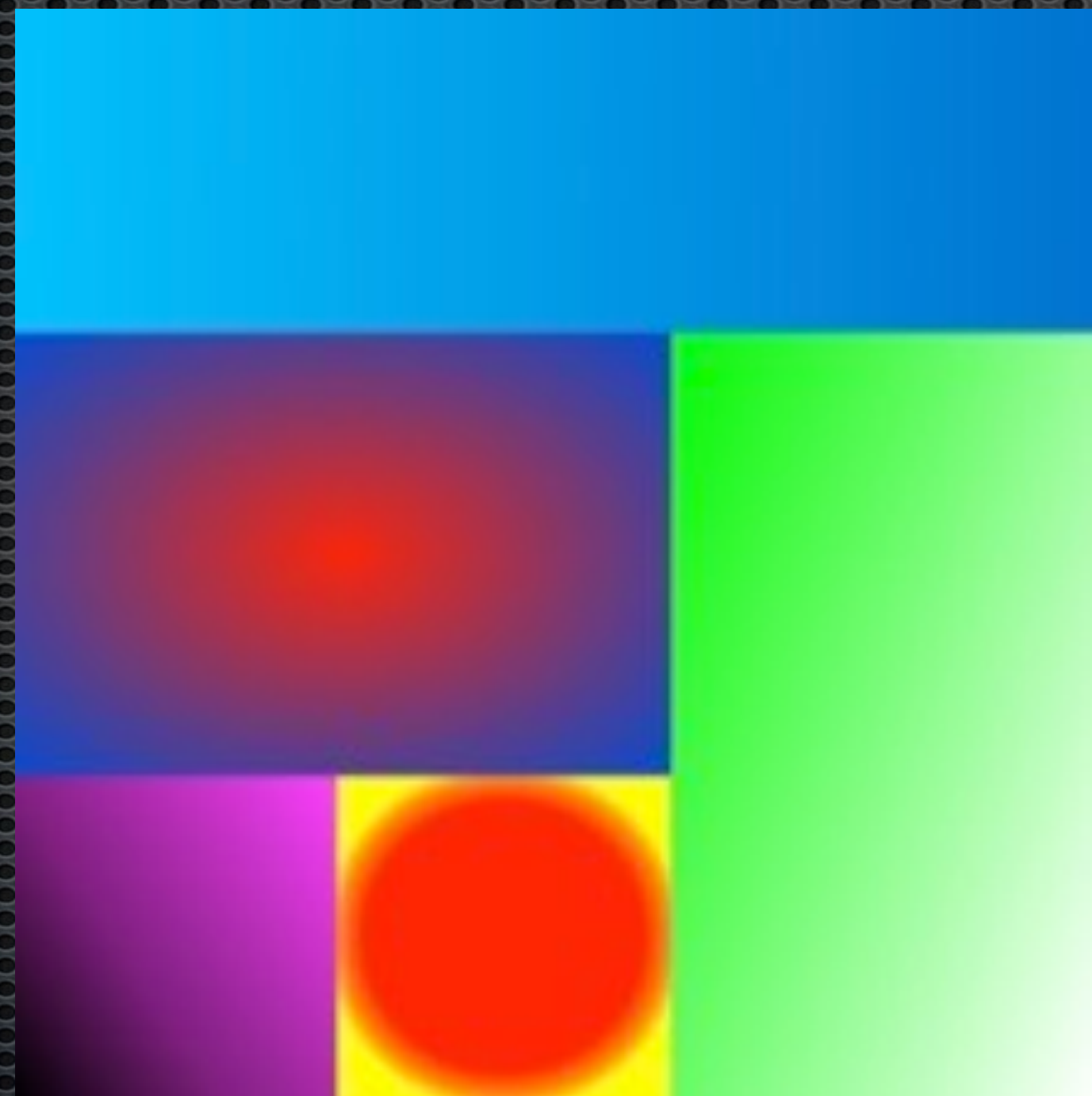
Formatons

GIF



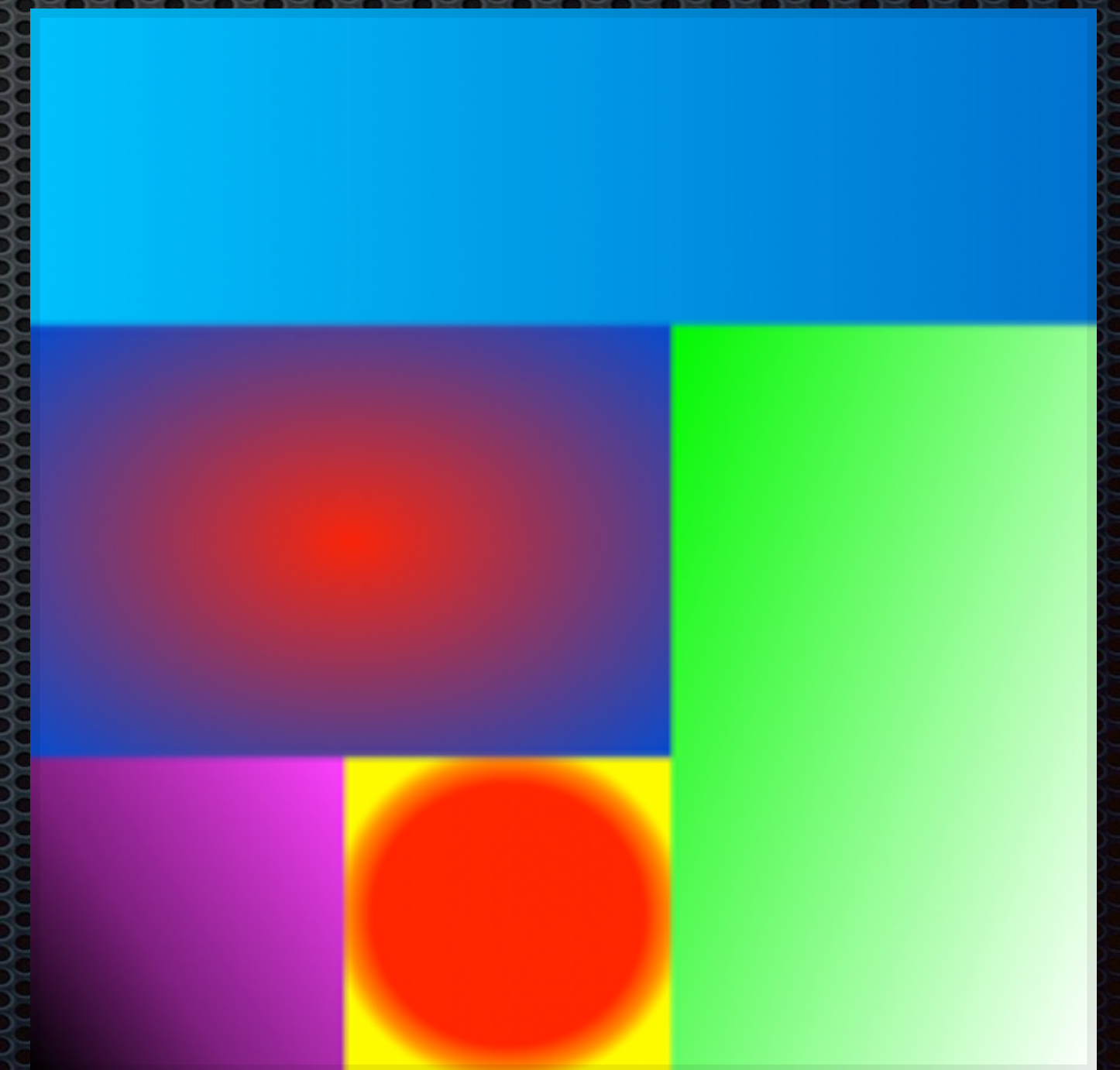
14 ko

JPEG



14 ko

PNG



53 ko

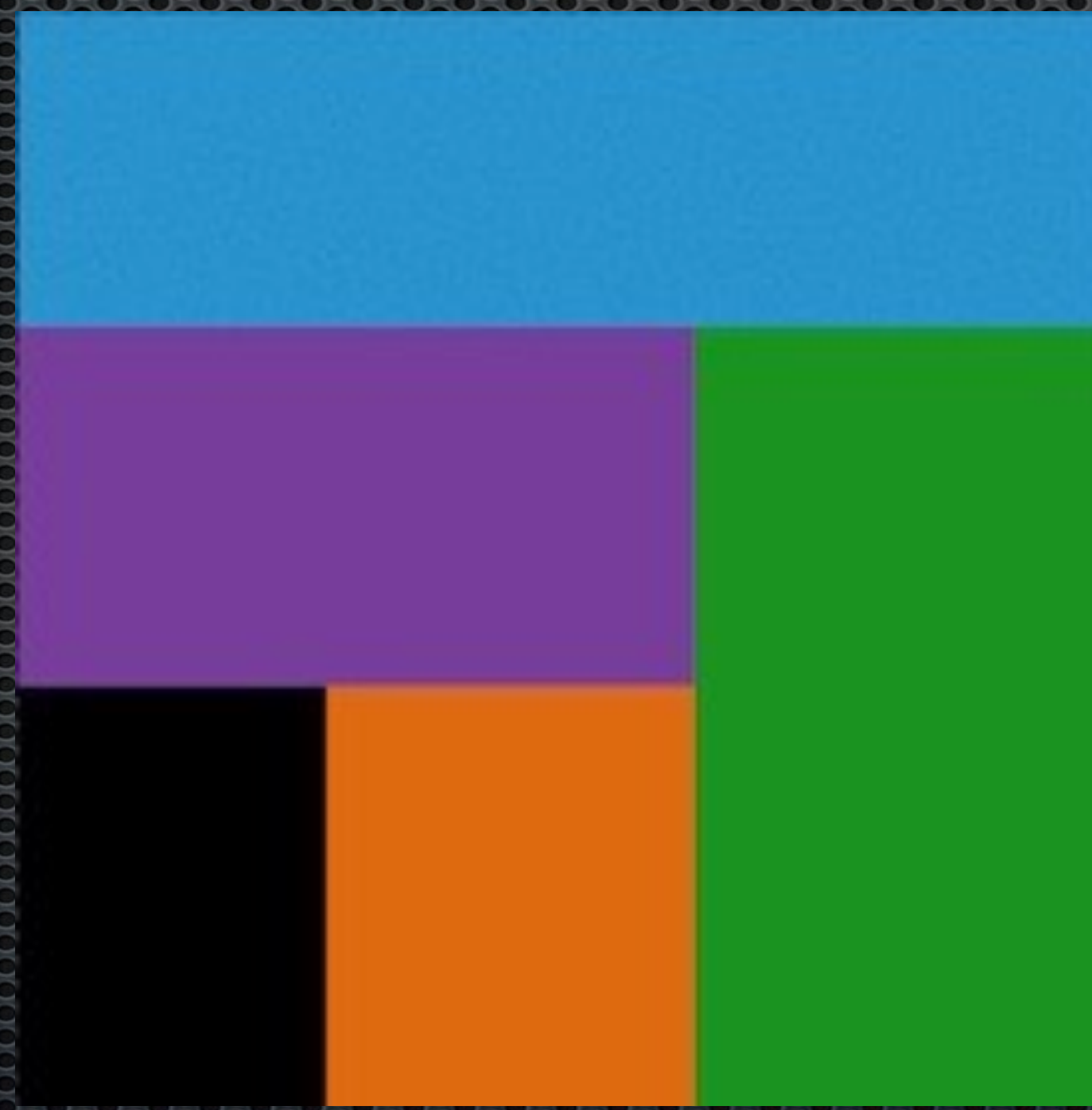
Formatons

GIF



7 ko

JPEG








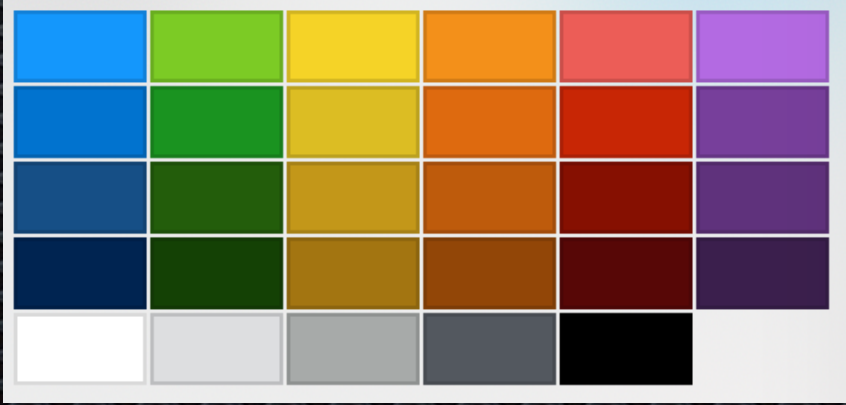
13 ko

PNG



28 ko

Autres caractéristiques

	GIF	JPEG	PNG
			
			
	256	16 millions	280 mille milliards



À bientôt !



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