Learning Resources®

LER 9463

ages 5+
años
ans
jahre

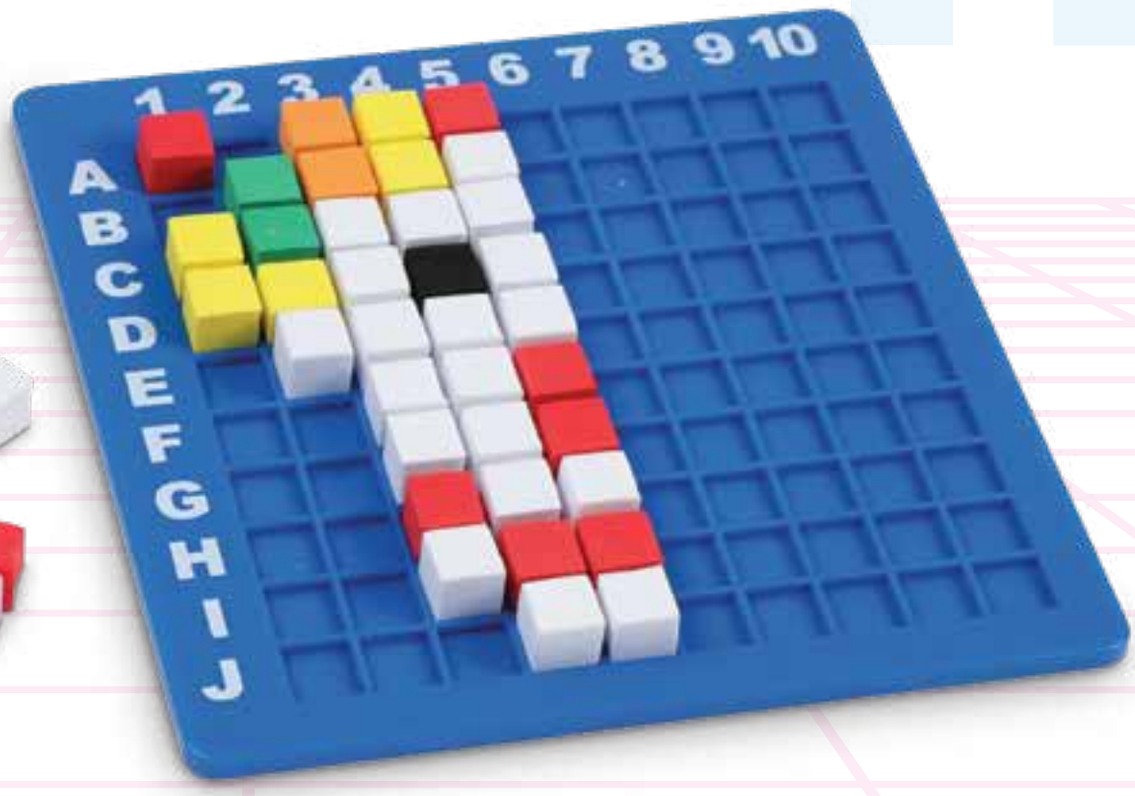
grades K+

STEM

STEM Explorers™ Pixel Art Challenge

El reto del pixel art de STEM Explorers • Art du pixel STEM Explorers
STEM Explorers Anspruchsvolle Pixel-Kunst

Includes over **40** challenges!



⚠ WARNING:
CHOKING HAZARD - Small parts.
Not for children under 3 years.

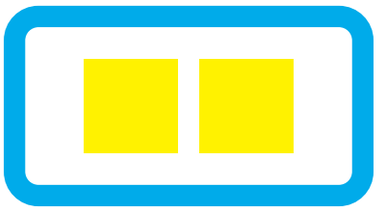
0-3

Build retro-cool pixel art and cutting-edge analog coding skills with STEM Explorers Pixel Art Challenge! Have you ever looked at a TV screen up close and seen a bunch of little dots? These dots are called “pixels”. All digital images are composed of pixels. In this set, you will learn how these little dots come together to form frame-worthy works of art!

CHALLENGE LEVEL DIFFICULTY

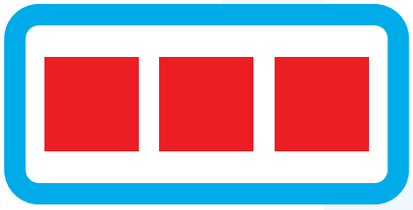
EASY

fácil
facile
Anfänger



MEDIUM

intermedio
moyen
Fortgeschrittener



HARD

difícil
difficile
Profi

ES

Desarrolla aptitudes para la codificación con innovadoras técnicas analógicas y crea obras de pixel art retro supermolonas con STEM Explorers: El reto del pixel art ¿Alguna vez has mirado de cerca la pantalla de un televisor y has observado un montón de puntitos pequeños? Estos puntitos se llaman píxeles. Las imágenes digitales se componen de píxeles. Con este set, aprenderás cómo se unen estos puntitos para formar obras de arte dignas de ser enmarcadas.

FR

Crée des œuvres d’art du pixel rétro tout en développant des compétences avancées de programmation analogiques avec l’art du pixel de STEM Explorers ! As-tu déjà vu une multitude de petits points en regardant un écran de télévision de très près ? Ces points, on les appelle des pixels. Toutes les images numériques sont composées de pixels. Dans ce kit, tu vas apprendre comment ces petits points s’assemblent pour former des œuvres d’art dignes d’être encadrées !

DE

Lege coole Pixelbilder wie aus Retrotagen und eigne dir dabei topaktuelle Programmierfertigkeiten an – mit STEM Explorers: Anspruchsvolle Pixel-Kunst! Hast du dir den TV-Bildschirm schon einmal aus der Nähe angeschaut und dort lauter kleine Pünktchen bemerkt? Diese Pünktchen heißen „Pixel“. Jedes digitale Bild besteht aus Pixeln. In diesem Spielset erfährst du, wie aus vielen dieser kleinen Pünktchen ein anspruchsvolles Kunstwerk entsteht!

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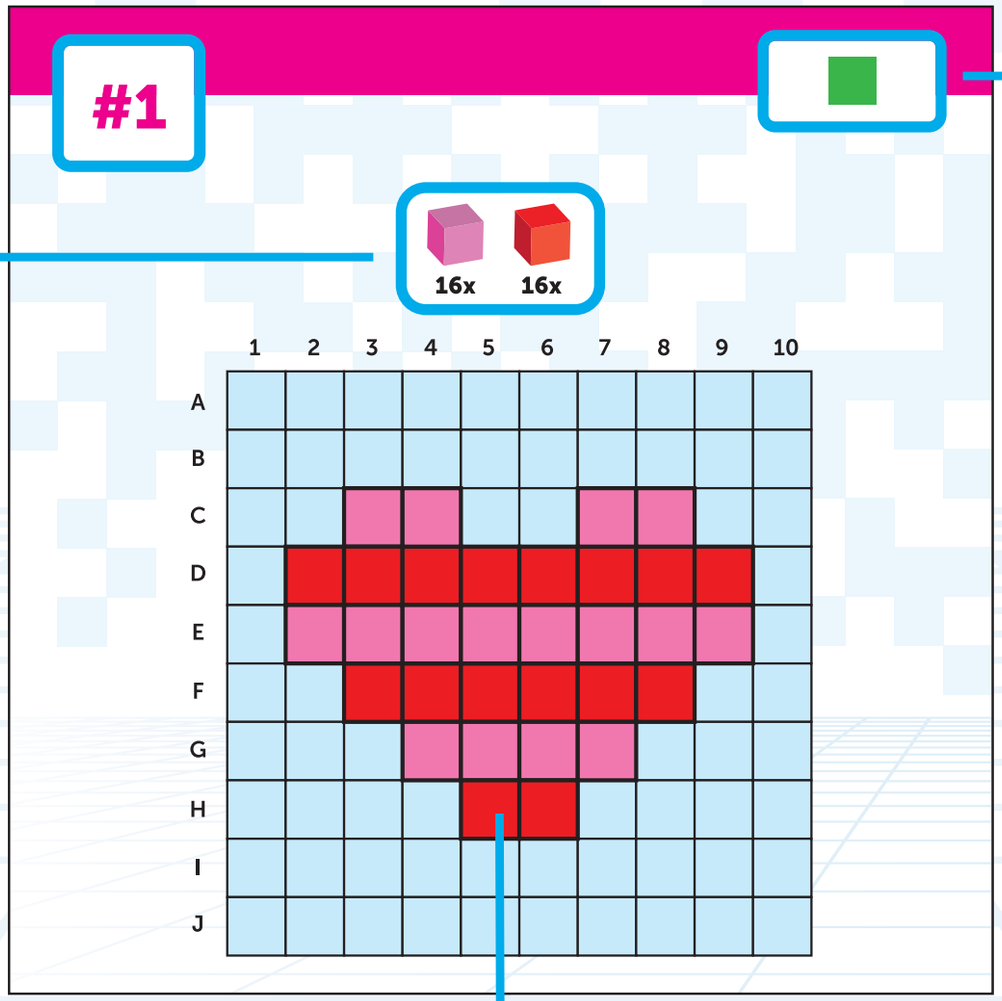
Match & Build

Build your pixel artwork by matching the images shown on the grid. Follow the coordinates: the x-axis is represented by numbers, the y-axis by letters. Use your finger to mark the exact location on the page and then match it, cube by cube, on the grid. These starter challenges are all about the joy of creation, as you pattern the pixel cubes to represent two-dimensional images.



CHALLENGE LEVEL DIFFICULTY

All the pieces needed to complete your artwork on the grid.

How your artwork should look when finished. Remember to follow the coordinates — C-3 is a great starting point!

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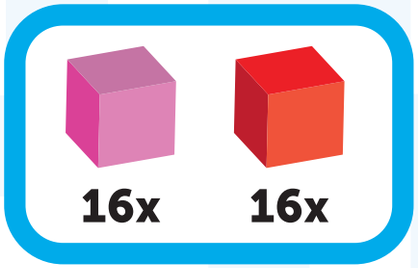
#1



	1	2	3	4	5	6	7	8	9	10
A										
B										
C										
D										
E										
F										
G										
H										
I										
J										

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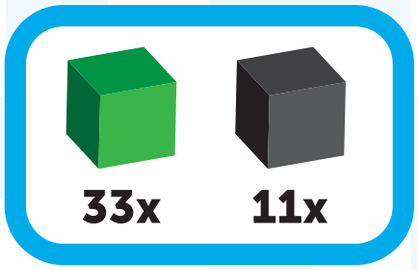
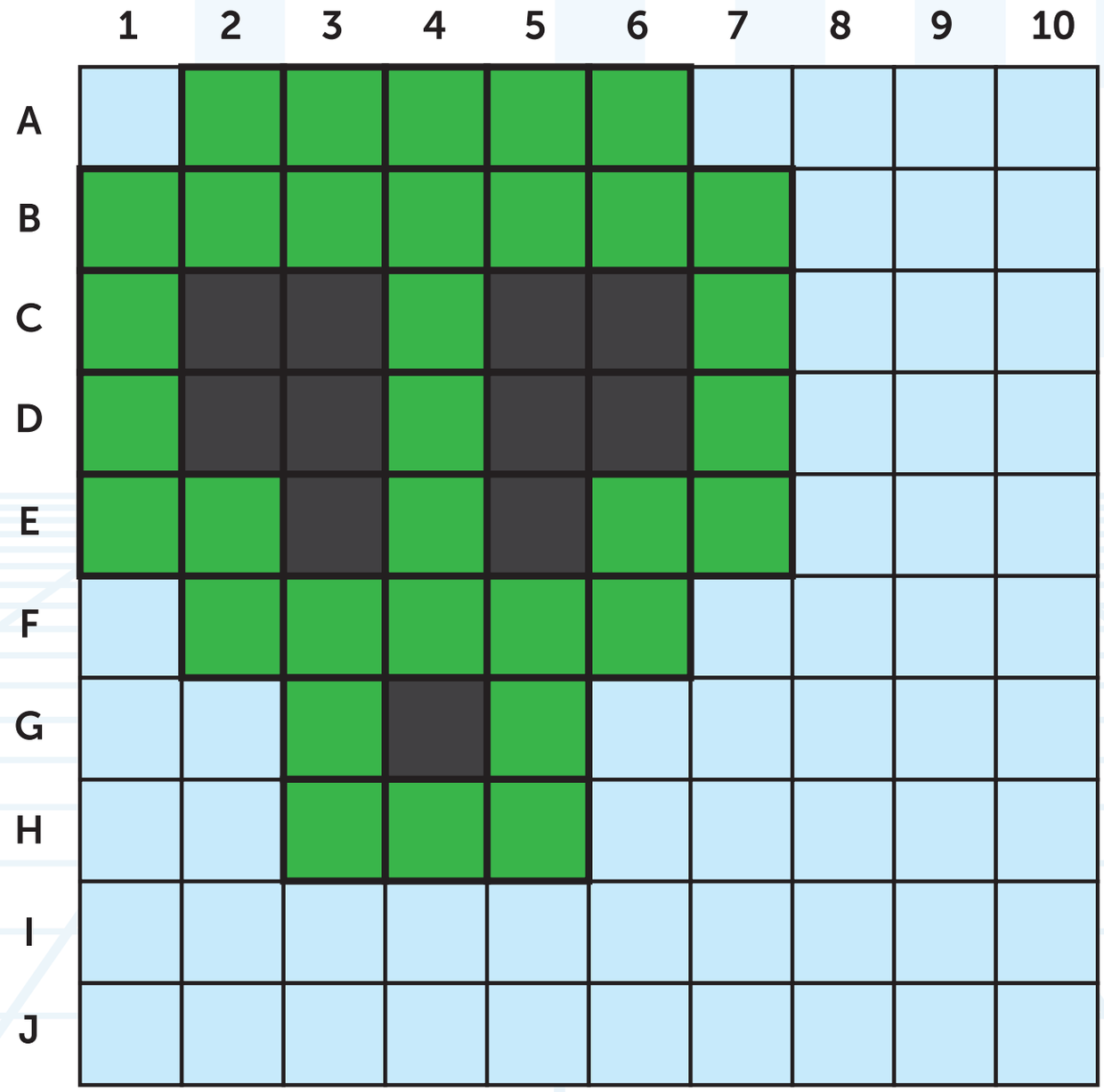
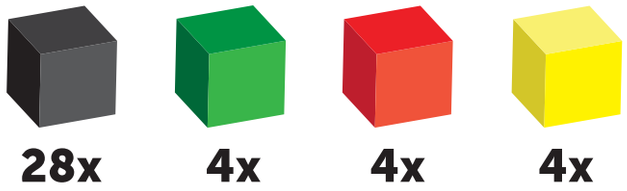
#2

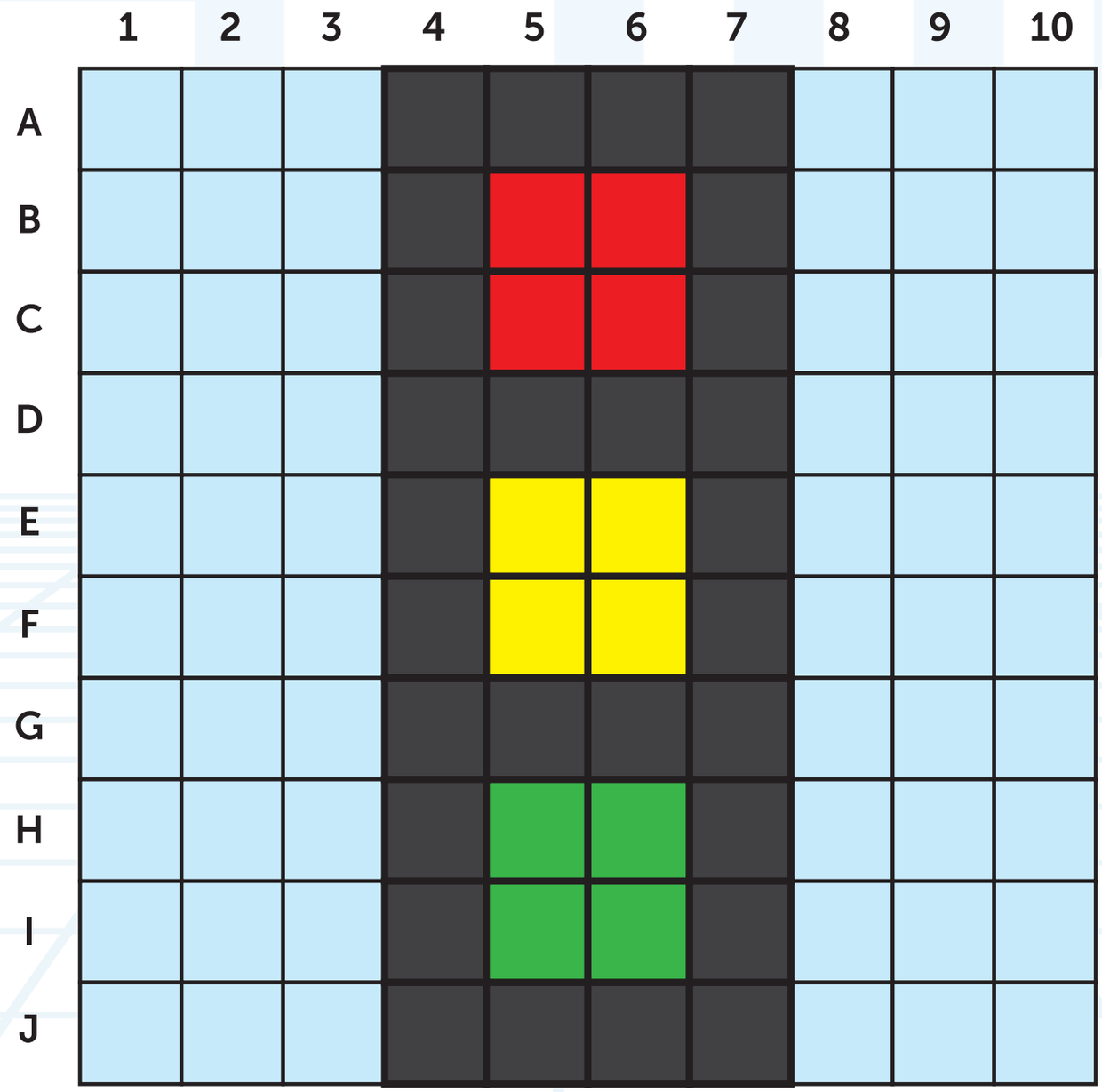




©Learning Resources, Inc.

#3





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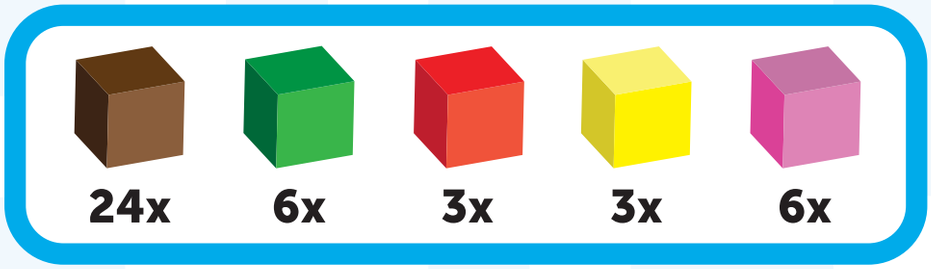
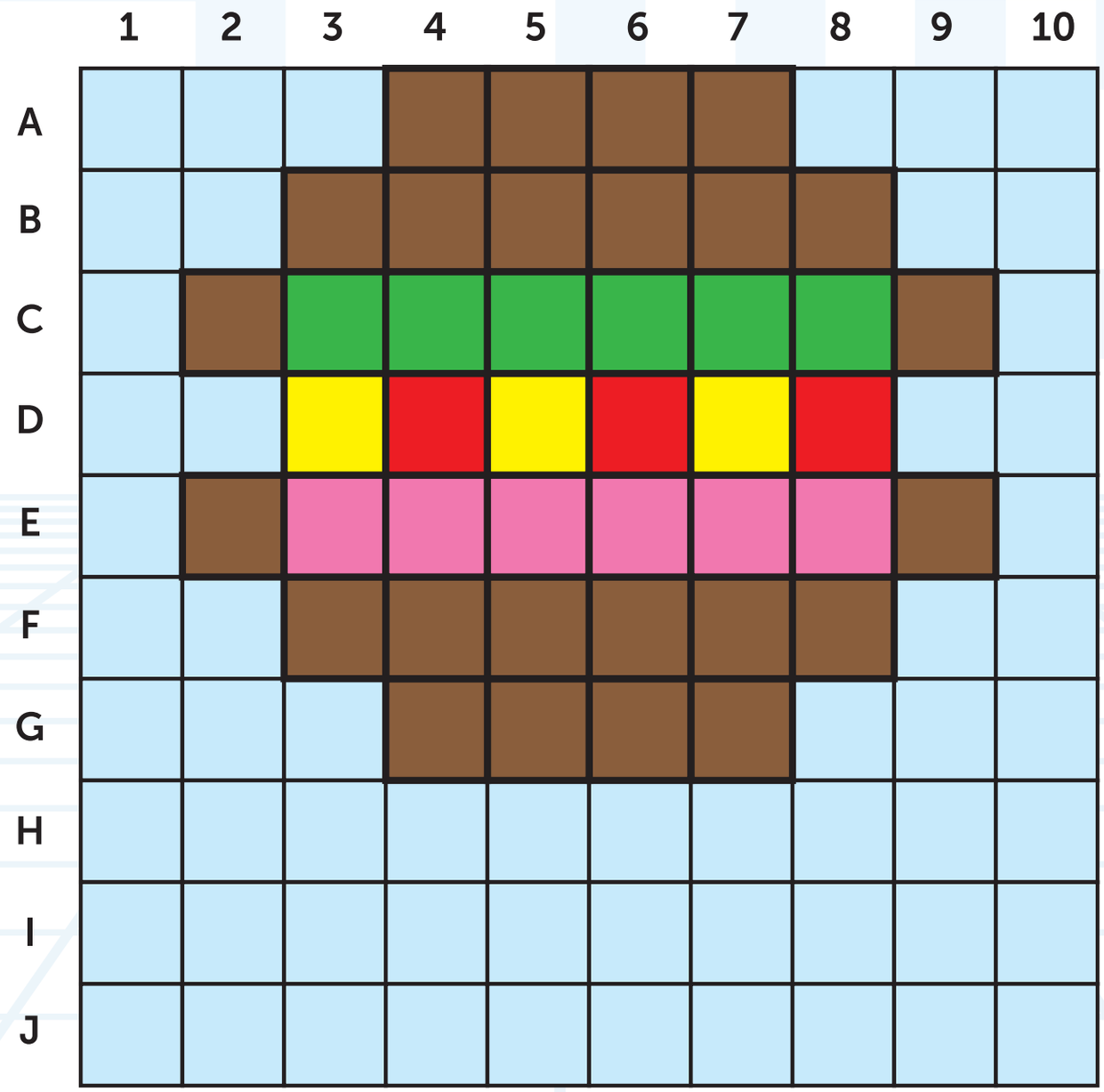
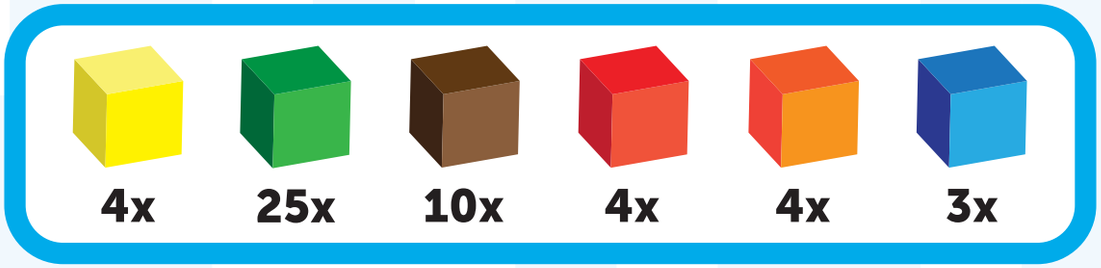
#4

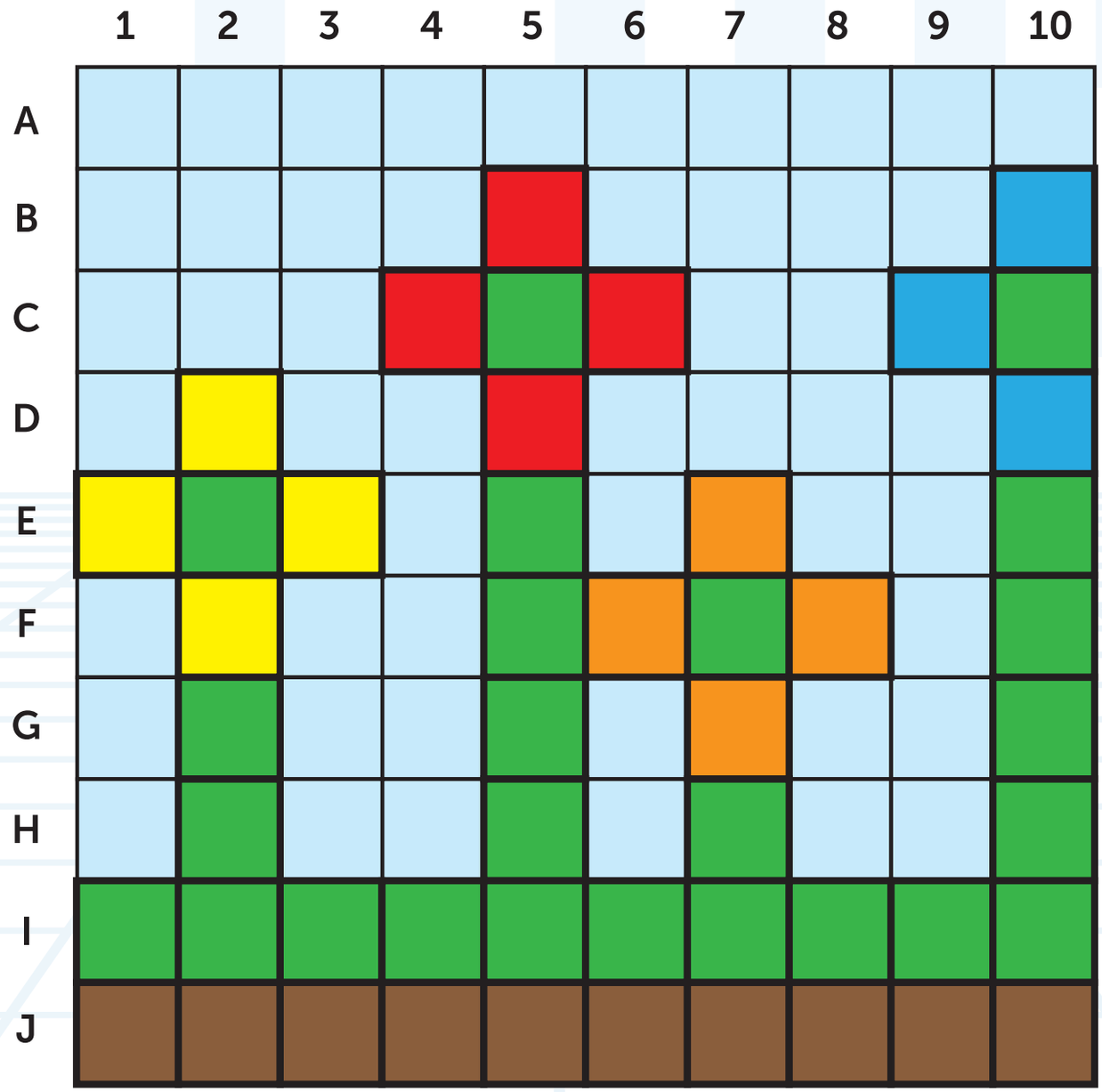




©Learning Resources, Inc.

#5





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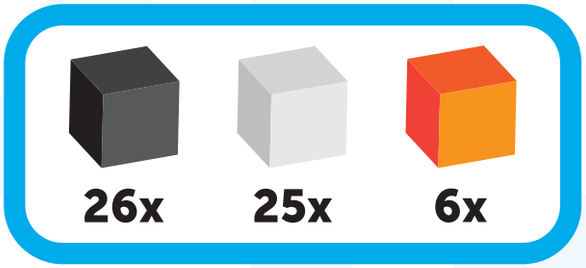
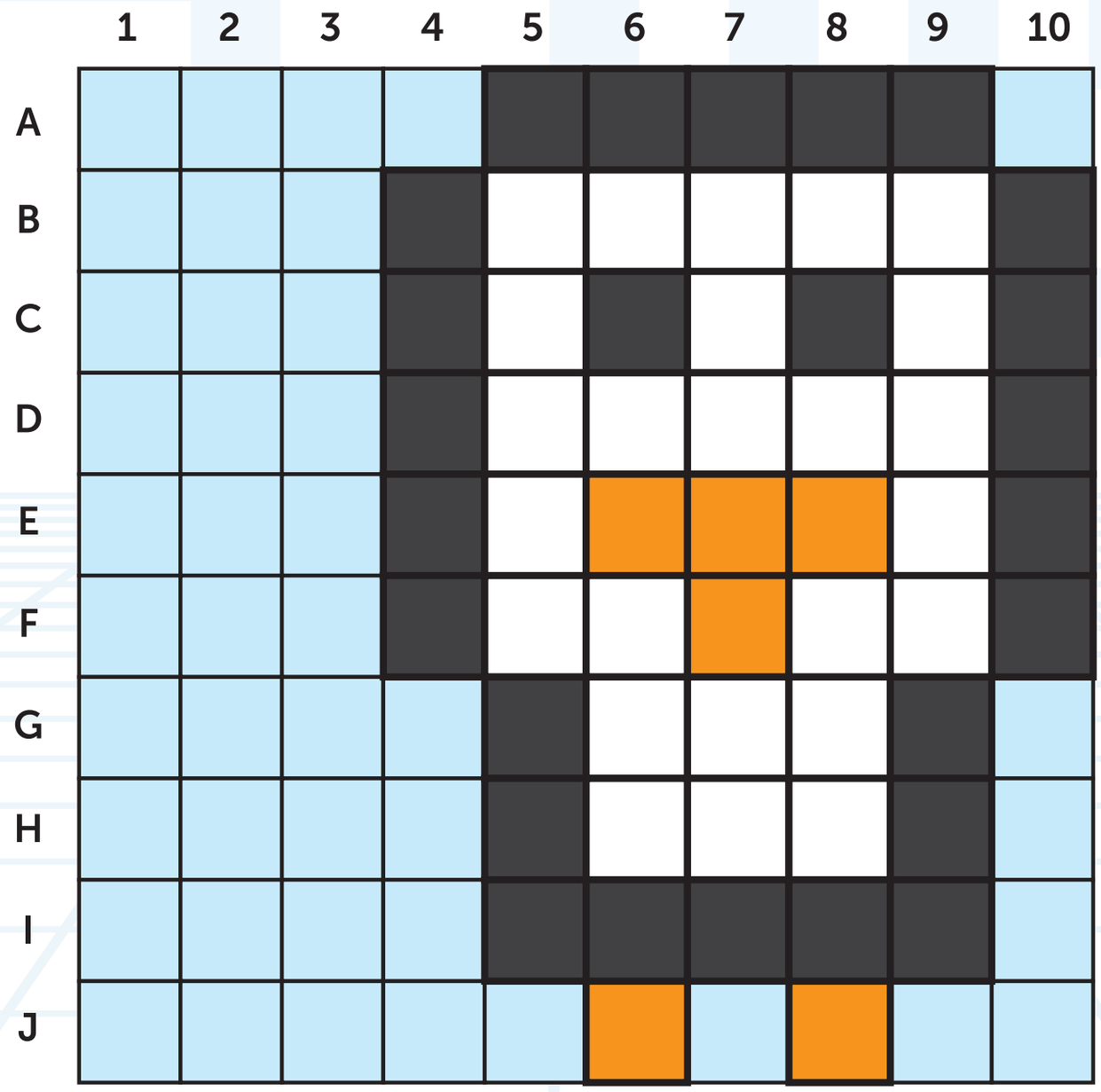
#6





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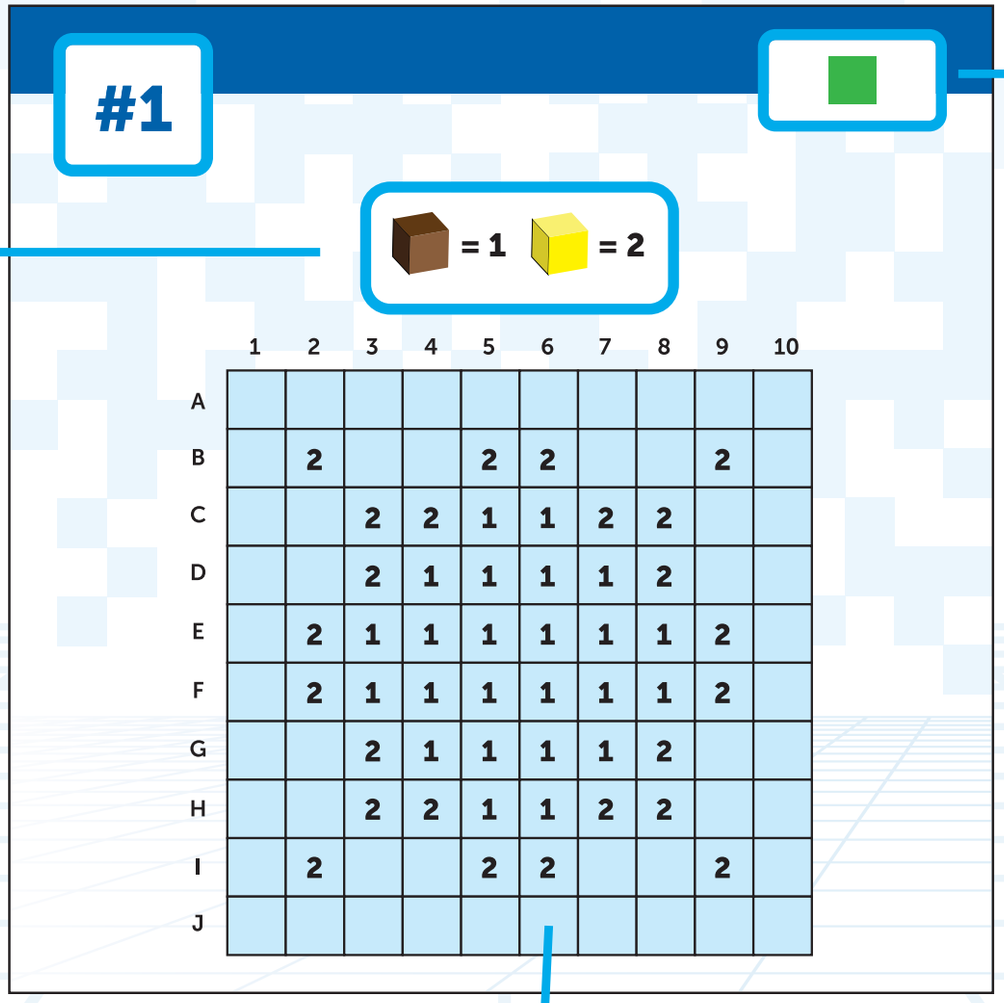
Color By Number

Colorea según los números • Coloriage à numéros • Malen nach Zahlen

In these challenges, each color is represented by a different number. Use the formula to place the color cubes on the grid. When placed correctly, the pixel patterns will reveal an incredible image!



CHALLENGE LEVEL DIFFICULTY

The formula for matching the colors to the numbers on the grid.

Follow this pattern by placing your cubes on the grid. Check your artwork against the answer key in the back!

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#1

= 1 = 2

	1	2	3	4	5	6	7	8	9	10
A										
B		2			2	2			2	
C			2	2	1	1	2	2		
D			2	1	1	1	1	2		
E		2	1	1	1	1	1	1	2	
F		2	1	1	1	1	1	1	2	
G			2	1	1	1	1	2		
H			2	2	1	1	2	2		
I		2			2	2			2	
J										

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#2

	1	2	3	4	5	6	7	8	9	10
A										
B										
C			4	4	3	4	4			
D		3	4	4	3	4	4	3		
E		4	3	3	3	3	3	4		
F		4	4	4	3	4	4	4		
G		4	3	3	3	3	3	4		
H		3	4	4	3	4	4	3		
I			4	4	3	4	4			
J										

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#3

= 1 = 2 = 3 = 4

	1	2	3	4	5	6	7	8	9	10
A										
B				1						
C					1					
D					1	4				
E				3	2	4	3			
F				3	3	3	3			
G				3	3	3	3			
H				3	3	3	3			
I				3	3	3	3			
J				3	3	3	3			

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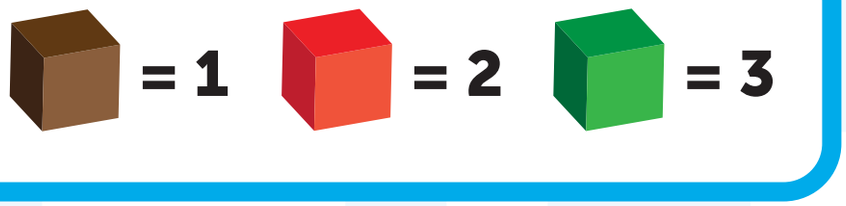
#4



	1	2	3	4	5	6	7	8	9	10
A			3			2				
B			3	3		3				
C				3	3	3		3		
D					3	3		3	3	
E					3	3		3		
F					3	3	3			
G				3	3	3				
H				1	1	1	1			
I				1	1	1	1			
J					1	1				

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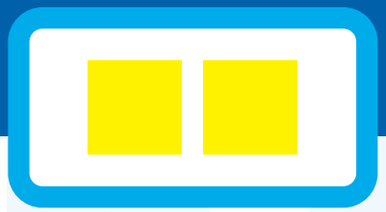
#5



= 1 = 6 = 7 = 8

	1	2	3	4	5	6	7	8	9	10
A										
B			6	6						
C		8	7	6						
D	8	8	6	6						6
E			6	6	6				6	6
F		6	6	1	6	6	6	6	6	6
G		6	6	6	1	1	6	6	6	
H			6	6	6	6	6	6		
I				6	6	6	6			
J										

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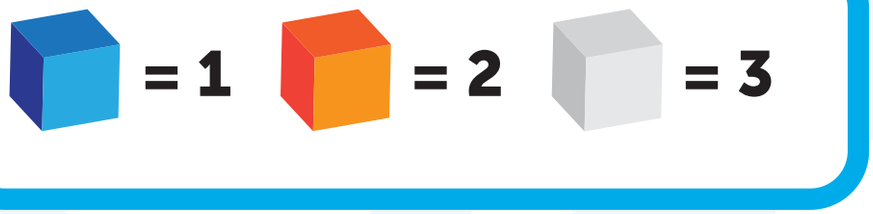
#6



	1	2	3	4	5	6	7	8	9	10
A										
B									3	
C								3	3	2
D								3		
E		3						3		
F			3	3	3	3	3	3		
G				3	3	3	3	3		
H	1	1	1	1	3	3	3	1	1	1
I	1	1	1	1	1	1	1	1	1	1
J	1	1	1	1	1	1	1	1	1	1

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#7

= 1 = 2 = 3 = 4 = 7 = 9

	1	2	3	4	5	6	7	8	9	10
A	3	3						3		
B			4				4			3
C				4		4			3	3
D	3	3		4	4					
E	3			9	4	7	7			
F				9	2	2	9	7		
G				9	9	9	9			
H			9	9	9	9	9	9		
I		9	9	9	1	1	9	9	9	
J	1	1	1	1	1	1	1	1	1	1

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#8

= 1 = 2 = 3 = 4 = 5 = 6 = 7 = 9

	1	2	3	4	5	6	7	8	9	10
A	9		3	5	9	9	6	1		9
B		2	3	5	7	7	6	1	2	
C	5	2	7	7	7	7	7	7	2	5
D	5	5	7	4	7	7	4	7	5	5
E		7	7	7	7	7	7	7	7	
F			7	7	9	9	7	7		
G			7	7	9	9	7	7		
H			9	7	7	7	7	9		
I			7	9	9	9	9	7		
J				7	7	7	7			

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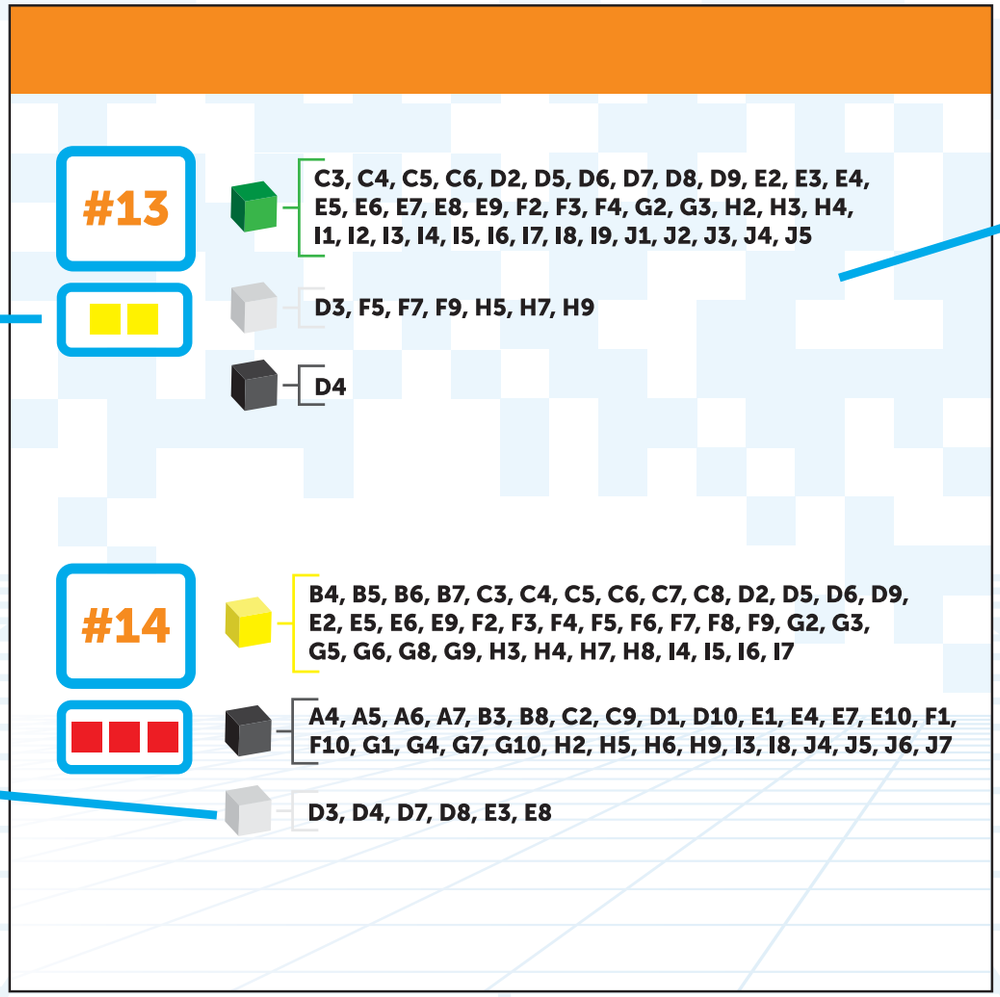
Coordinates

Now that you understand the basics of pixel building, let's try some abstract graphing challenges! Place cubes according to the coordinates printed on the page—no visual assistance. Remember that coordinates always start with a letter and a number. Wherever the two intersect is where you place your cubes!



CHALLENGE LEVEL DIFFICULTY

Follow these coordinates, placing a cube at each of the positions listed on the grid. When finished, check your answer in the back of the guide!

The color of the cubes needed to complete the picture.

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#1

Choose any color cube:

A2, A4, C1, C5, D2, D3, D4, G7, G9, I7, I8, I9, J6, J10

#2

Choose any color cube:

A3, A8, A10, B2, B4, B9, C1, C2, C3, C4, C5, C8, C10, F1, F2, F3, G1, G3, H1, H3, H8, H9, H10, I1, I3, I8, I10, J1, J2, J3, J8, J9, J10

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#3

C5, C6, D4, D5, D6, D7, E4, E5, E6, E7, F3, F4, F7, F8,
G3, G4, G7, G8, H3, H4, H5, H6, H7, H8, I4, I5, I6, I7

F5, F6, G5, G6

#4

C5, C6, D4, D5, D6, D7, E4, E5, E6, E7, F3, F4, F7, F8,
G3, G4, G7, G8, H3, H4, H5, H6, H7, H8, I4, I5, I6, I7

F5, F6, G5, G6

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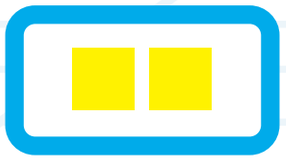
#5

A1, A10, B2, B9, C3, C4, C5, C6, C7, C8, D4, D7, E2, E3, E4, E5, E6, E7, E8,E9, F5, F6, G2, G3, G4, G7, G8, G9, H4, H5, H6, H7, I3, I8, J2, J9

D5, D6, F4, F7, G5, G6

#6

D4, D5, D6, D7, E3, E4, E5, E6, E7, E8, F2, F5, F6, F9, G2, G3, G5, G6, G8, G9, H2, H3, H4, H5, H6, H7, H8, H9, I3, I5, I6, I9, J4, J5, J6, J7



B4, B7, C5, C6, F3, F4, F7, F8, G4, G7, I4, I7

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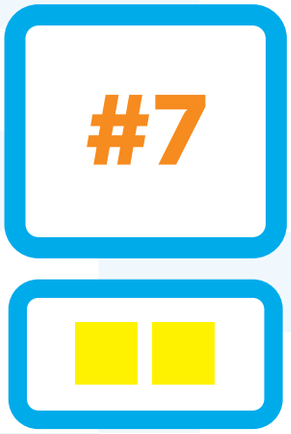
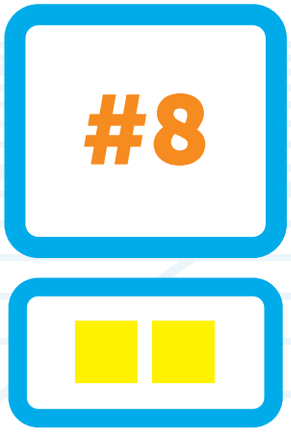
#7



A4, B3, B4, B5, C3, C4, C5, D3, D4, D5, E3, E4, E5, F3, F4, F5, G3, G4, G5, H3, H4, H5

G1, G7, H2, H6, I3, I4, I5, J4

#8



A10, B9, C8, D7, E6, F2, F5, G3, G4, H3, H4, I2, I5, J1

A9, B8, B10, C7, C9, D6, D8, E5, E7, F4, F6, G5

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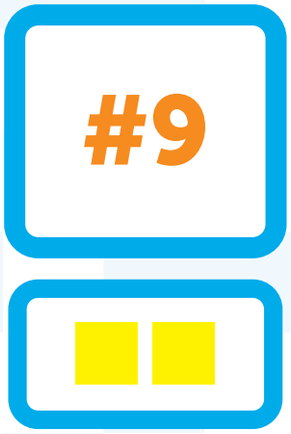
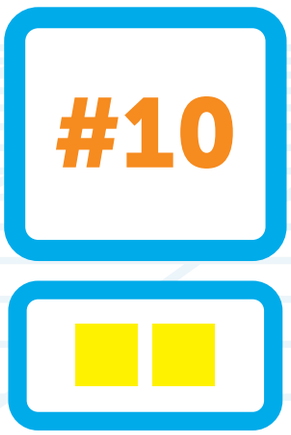
#9



A5, A7, B4, B6, B8, C3, C5, C7, D4, D8, E7, F8, G7, H8, I7, J8

A6, B5, B7, C4, C8, D3, D7, E8, F7, G8, H7, I8, J7

#10



B5, B6, C4, C7, D3,D5, D7, E4, E5, E7

A4, A5, A6, B3, B4, B7, C2, C3, C5, C6, C8, D2, D4, D6, D8, E3, E6, F4, F5, F6

G5, H5, I5, J5

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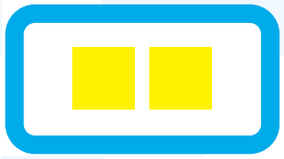
#11

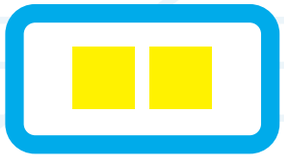


B4, B5, B6, C3, C4, C5, C7, D2, D3, D4, D5, D6, D8, E2, E3, E4, E5, E6, E8, F3, F4, F5, F6, F7, G4, G5, G6, H4, H5, H6, I5

C6, D7, E7

J5

#12



D3, D4, D6, D7, E2, E3, E4, E5, E7, E8, E9, F2, F3, F4, F5, F6, F8, G2, G3, G4, G5, G6, G7, G8, H3, H4, H5, H6, H7, I3, I4, I6, I7

B7, C6, D5

E6, F7

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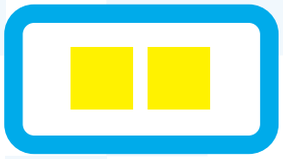
#13

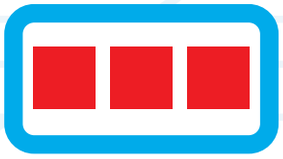


C3, C4, C5, C6, D2, D5, D6, D7, D8, D9, E2, E3, E4, E5, E6, E7, E8, E9, F2, F3, F4, G2, G3, H2, H3, H4, I1, I2, I3, I4, I5, I6, I7, I8, I9, J1, J2, J3, J4, J5

D3, F5, F7, F9, H5, H7, H9

D4

#14



B4, B5, B6, B7, C3, C4, C5, C6, C7, C8, D2, D5, D6, D9, E2, E5, E6, E9, F2, F3, F4, F5, F6, F7, F8, F9, G2, G3, G5, G6, G8, G9, H3, H4, H7, H8, I4, I5, I6, I7

A4, A5, A6, A7, B3, B8, C2, C9, D1, D10, E1, E4, E7, E10, F1, F10, G1, G4, G7, G10, H2, H5, H6, H9, I3, I8, J4, J5, J6, J7

D3, D4, D7, D8, E3, E8

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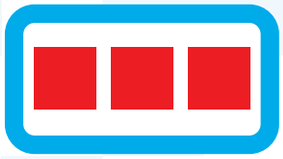
#15



C5, C6, D3, D4, D7, D8, E2, E3, E4, E7, E8, E9, F2, F4, F5, F6, F7, F9, G2, G4, G7, G9, H2, H3, H4, H7, H8, H9, I2, I3, I4, I7, I8, I9

A5, A6, B4, B5, B6, B7, C3, C4, C7, C8, D2, D9, E1, E10, G5, G6, H5, H6, I5, I6

D5, D6, E5, E6, F3, F8, G3, G8

J1, J2, J3, J4, J5, J6, J7, J8, J9, J10

#16

D5, D6, E5, E6, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, G1, G2, G3, G4, G7, G8, G9, G10, H1, H3, H8, H10, I1, I2, I8, I10, J1, J2, J3, J8, J9, J10

B4, B7, C4, C5, C6, C7, E1, E3, E8, E10, H2, H9, I2, I9

G5, G6, H4, H5, H6, H7, I4, I5, I6, I7, J4, J5, J6, J7

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#17

A4, A5, A6, A7, B3, B4, B5, B6, B7, B8, C2, C5, C6, C9, D1, D10, E1, E2, E9, E10, I1, I10, J2, J3, J4, J5, J6, J7, J8, J9

D3, D4, D7, D8, E3, E8, G2, G3, G4, G5, G6, G7, G8, G9, H2, H3, H4, H5, H6, H7, H8, H9

C3, C4, C7, C8, D2, D5, D6, D9, E5, E6, F2, F3, F4, F7, F8, F9, G1, G10, H1, H10, I2, I3, I4, I5, I6, I7, I8, I9

E4, E7

#18

A1, A2, A9, B1, B2, B9, C1, C4, C5, C6, C7, C9, C10, D2, D3, D4, D5, D6, D7, D9, E2, E5, E6, F3, F4, F5, F6, F10, G1, G3, G4, G5, G6, G7, G7, G8, H2, H3, H8, H9

A10, B10, C2, D8, E3, E8, E9, F1, F2, F7, F8, F9, G2, G9, G10, I4, I7

E4, E7, H4, H5, H6, H7, I3, I5, I6, I8, J4, J5, J6, J7

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#19

A1, A10, F4, F7, J5, J6

B1, B2, B9, B10, C1, C3, C8, C10, D2, D3, D4, D5, D6, D7, D8, D9, E2, E5, E6, E9, F2, F5, F6, F9, G3, G4, G5, G6, G7, G8, H4, H5, H6, H7, I5, I6

C2, C9, E3, E4, E7, E8, F3, F8, G2, G9, H3, H8, I4, I7

#20

A7, A8, A9, A10, B10, C8, C10, D10, E7, E10, F1, F7, F10 G1, G6, G10, H5, H10, I4, I5, I10, J4, J8, J9, J10

B4, B5, B6, B7, C3, C4, C5, C6, C7, D2, D3, D4, D5, E1, E2, E3

D6, D7, E4, E5, F2, F3

B8, B9, C9, D8, D9, E8, E9, F8, F9, G7, G8, G9, H6, H7, H8, H9, I6, I7, I8, I9, J5, J6, J7

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Coding

Coding involves a sequence of commands called an algorithm, or coding string, that tells a computer what to do. In short: coding programs a computer to act in ways predetermined by you, the user. Did you know that you can learn the building blocks of coding without a computer? That's right: You can gain crucial coding experience by solving information-sorting logic puzzles, like these!

#3

W- B-

A) >>>>>>>>>>
B) >>>>>>>>>>
C) >>>WWWW>>>
D) >>WWBBWW>>
E) >WWBBBBWW>
F) >>WWBBWW>>
G) >>>WWWW>>>
H) >>>>>>>>>>
I) >>>>>>>>>>
J) >>>>>>>>>>

#4

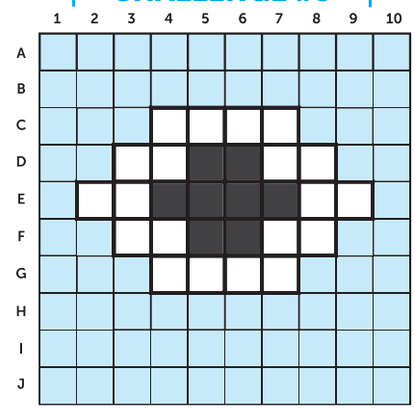
Y- W-
G- B-

A) >>G>GG>G>>
B) >>>GGGG>>>
C) >>>>GG>>>>
D) >>>YYYY>>>
E) >>YWWWWY>>
F) >>YWBWBY>>
G) >>YYYYYY>>
H) >>YBYYBY>>
I) >>YYBBYY>>
J) >>>YYYY>>>

CHALLENGE LEVEL DIFFICULTY

The coding key for this puzzle.

CHALLENGE #3



This shows where on the grid to place the cubes (rows A-J). In each coding string, a carrot (>) represents a blank space. Place a cube in the spot marked with the applicable symbol from the key. See the example to the left!

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#1

X- Choose Any Color Cube

A) >X>>>X>>>>
B) >>X>X>>>>>
C) >X>X>X>>>>
D) XXXXXXX>>>
E) X>>X>>X>>>
F) X>X>X>X>>>
G) >>>>>>>>>>
H) >>>>>>>>>>
I) >>>>>>>>>>
J) >>>>>>>>>>

#2

W-

A) >>>WWW>>>>
B) >>WWWWW>>>
C) >WW>>WWW>>
D) W>>>>>>WW>
E) >>>>>>>WWW
F) >>>>>>>WWW
G) W>>>>>>WW>
H) >WW>>WWW>>
I) >>WWWWW>>>
J) >>>WWW>>>>

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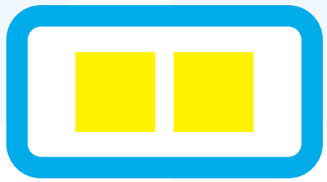
#3



W- B-

A) >>>>>>>>>>
B) >>>>>>>>>>
C) >>>WWWW>>>
D) >>WWBBWW>>
E) >WWBBBBWW>
F) >>WWBBWW>>
G) >>>WWWW>>>
H) >>>>>>>>>>
I) >>>>>>>>>>
J) >>>>>>>>>>

#4

Y- W-

G- B-

A) >>G>GG>G>>
B) >>>GGGG>>>
C) >>>>GG>>>>
D) >>>YYYY>>>
E) >>YWWWWY>>
F) >>YWBWBY>>
G) >>YYYYYY>>
H) >>YBYYBY>>
I) >>YYBBYY>>
J) >>>YYYY>>>

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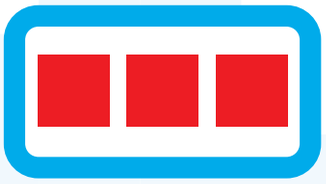
#5

P-
B-

W-
G-

A) >>>>>>>>>>
B) >>>>>>>>>>
C) GPWBPPBWPG
D) GPPPPPPPPPG
E) GPBPPPPBPG
F) >GPBBBBPG>
G) >>GPPPPG>>
H) >>>GGGG>>>
I) >>>>>>>>>>
J) >>>>>>>>>>

#6



B-
W-
R-

A) >>>>>>>>>>
B) >RRRRRRRR>
C) >RBWBWBWR>
D) >RWBWBWBR>
E) >RBWBWBWR>
F) >RWBWBWBR>
G) >RBWBWBWR>
H) >RWBWBWBR>
I) >RRRRRRRR>
J) >>>>>>>>>>

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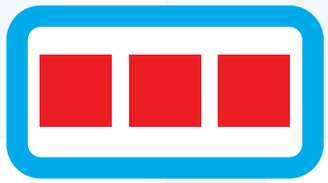
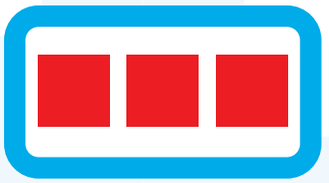
#7



W- B- Y-

A) >>>BBBB>>>
B) >>BWWWWB>>
C) >BWYYYYYB>
D) BWYYYWWYYB
E) BWYYWYYYYB
F) BWYYWYYYYB
G) BWYYWYYYYB
H) >BYYWYYYB>
I) >>BYYYYB>>
J) >>>BBBB>>>

#8



W- B-

G- R-

A) >>>>>>>>>>
B) >>>>>>>R>>
C) >>>>>>>>R>
D) >>>>>>>WWW
E) >>RG>>>BBB
F) WGGRGW>BBB
G) >WWWW>>BBB
H) >>WW>>>BBB
I) >>>>>>>>>>
J) >>>>>>>>>>

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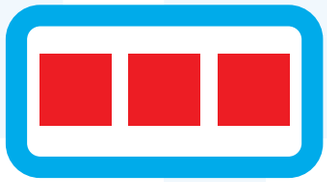
#9



W- B- R-

L- G- Y-

Q-

A) >>W>>>>W>>
B) >>>L>>L>>>
C) >>>>LL>>>>
D) >>QQQQQQ>>
E) >>QYGRBQ>>
F) >>QYGRBQ>>
G) >>QWLWLQ>>
H) >>QQQQQQ>>
I) >>Q>>>>Q>>
J) >>>>>>>>>>

#10

W- B- R-

L- X- G-

A) >>>WWWW>>>
B) >>WGGGGW>>
C) >>WGXGGW>>
D) >>WGXXGW>>
E) >>WGGGGW>>
F) >>WWWWWW>>
G) >>WWBWLW>>
H) >>WBBBWW>>
I) >>WWBWRW>>
J) >>WWWWWW>>

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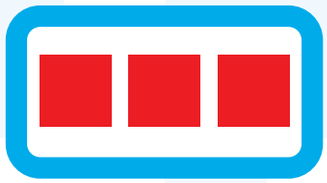
#11



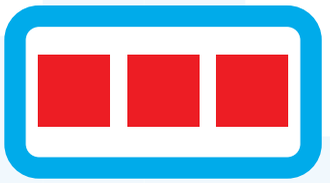
W-
B-
Y-

O-
R-
L-

G-

A) BBB>>>>>>>
B) >>>BBBB>>>
C) >>>>>>>B>>
D) >>>>>BBB>>
E) >>>>B>>>>>
F) >WWWWWWWW>
G) WWBWWYWORW
H) WBBBWWWLGW
I) WWBWBWBWWW
J) >WWWWWWWWW>

#12



W-
R-
B-

O-
Y-

A) WWW>>>>>>>
B) WBWW>>>>>>
C) WWBWWRR>>>
D) >WWBWWRR>>
E) >>WWWWRR>>
F) >>RWWWW>>>
G) >>RRRWYO>>
H) >>>RR>OOY>
I) >>>>>>>YO>
J) >>>>>>>>>O

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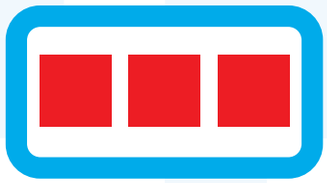
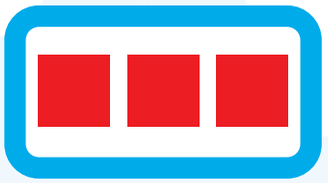
#13



Y- O- W-

A) >>>>>>>>>>
B) >>>OYYY>>>
C) >>YYOYYY>>
D) >YYYYYYYO>
E) >YYOYYOYY>
F) YYYYYYYOYY
G) YYOYYOYYYO
H) OOOWWWWOOO
I) >>>WWWW>>>
J) >>>>WW>>>>

#14



W- B- G-

A) >>>>>>>>>>
B) >>>GGGG>>>
C) >>GGBBGG>>
D) >GGBGGBGG>
E) >GBGBBGBG>
F) GBGBGGBGBG
G) WWGGBBGGWW
H) >WWBGGBWW>
I) >>>WWWW>>>
J) >>>>>>>>>>

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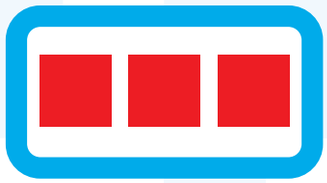
#15

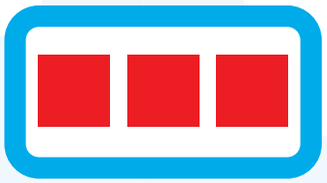


Y- B-

G- R-

A) B>>RGR>>>B
B) YB>>R>>>BY
C) B>>>>>B>>B
D) >>R>>BYB>>
E) >RGR>>B>>>
F) >>R>>>>>R>
G) >>>>B>>RGR
H) B>>BYB>>R>
I) YB>>B>>>>>
J) B>>>>>R>>B

#16



Y- R- G-

B- W- O-

A) YYYY>>OO>>
B) >Y>>>>O>>G
C) >>>R>OO>GG
D) >>>R>>>>GG
E) GG>R>WW>>>
F) G>RR>>WWW>
G) GG>>YY>>>>
H) >>>B>YY>>R
I) >>>B>Y>>>R
J) >BBB>>>RRR

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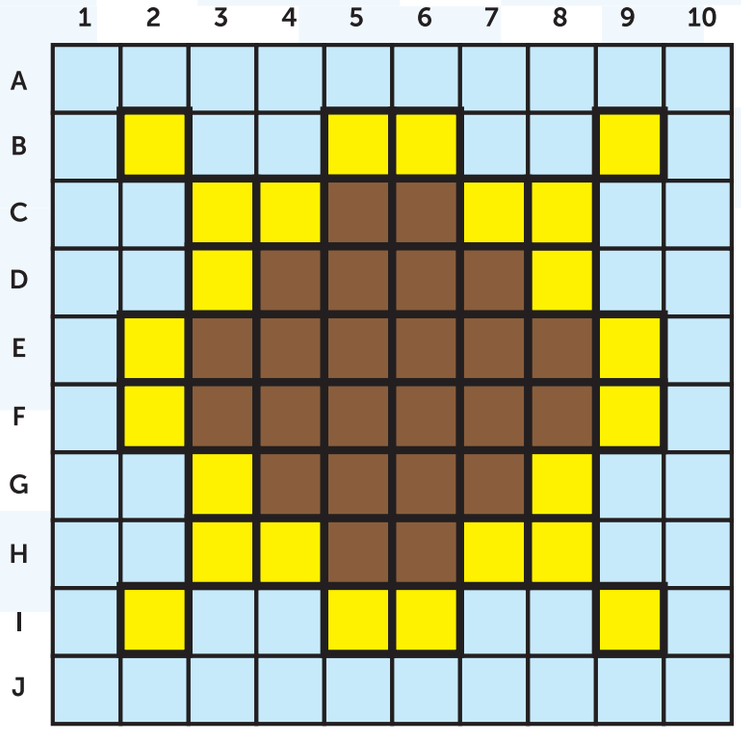
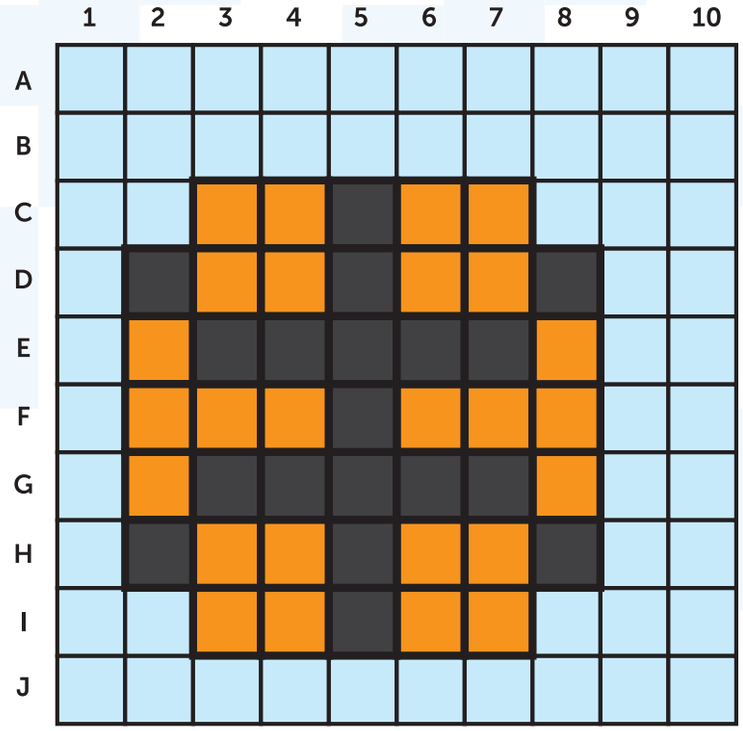
Color By Number Answer Key

Soluciones de las pruebas de colorea según los números
Réponses de Coloriage à numéros
Malen nach Zahlen Antworten

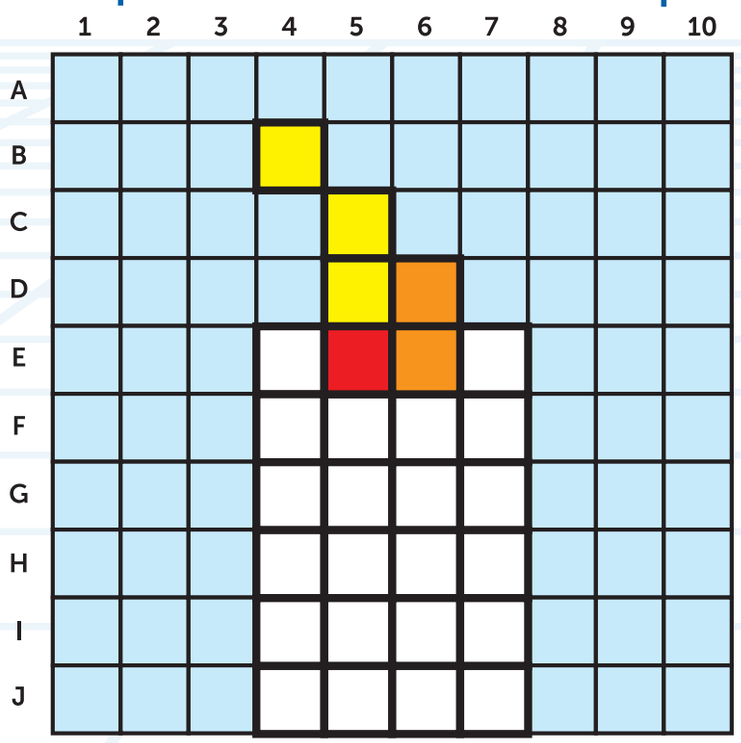
#1



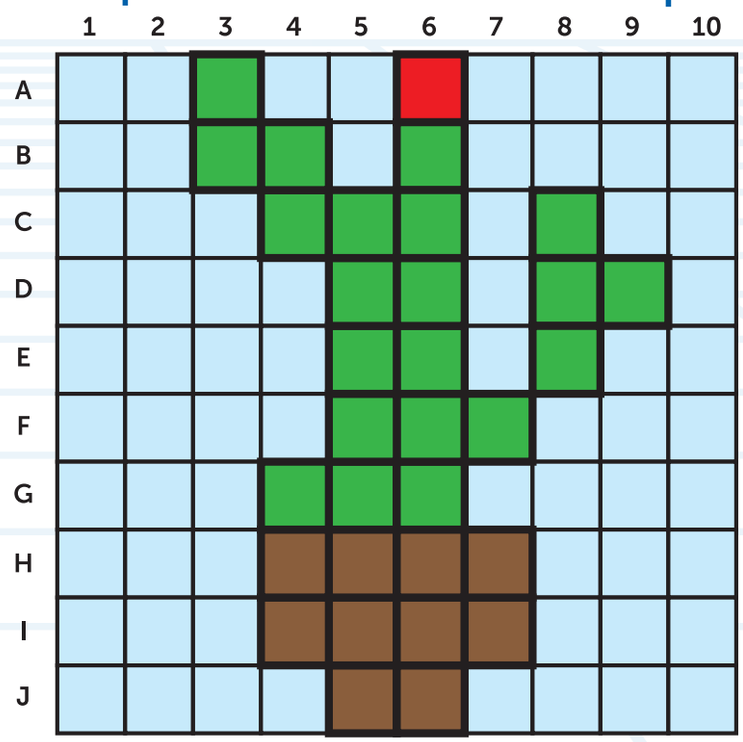
#2



#3



#4



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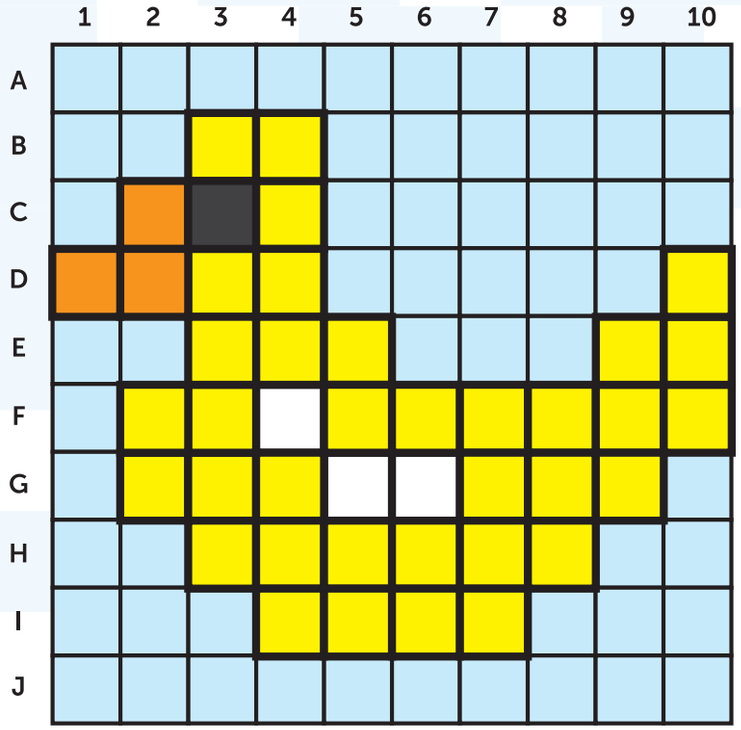
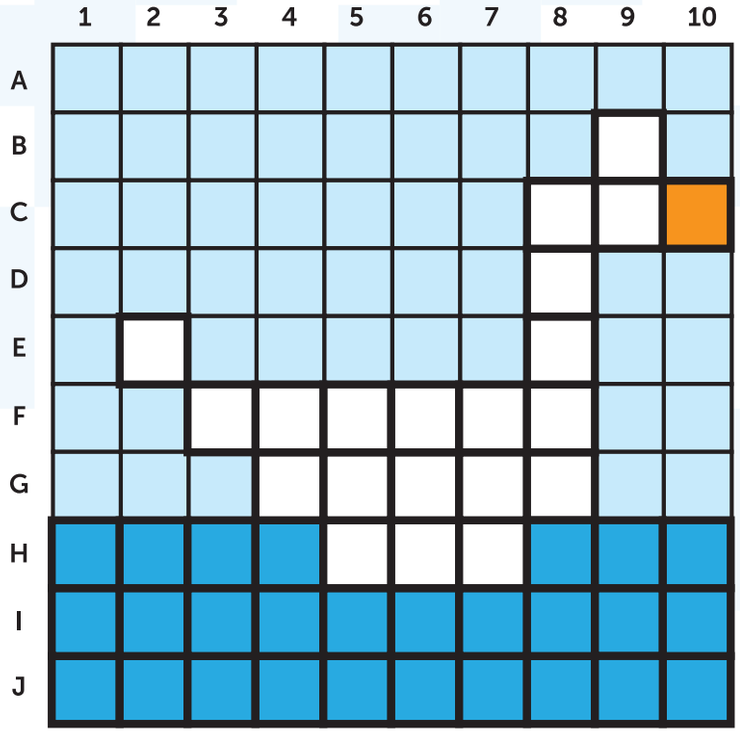
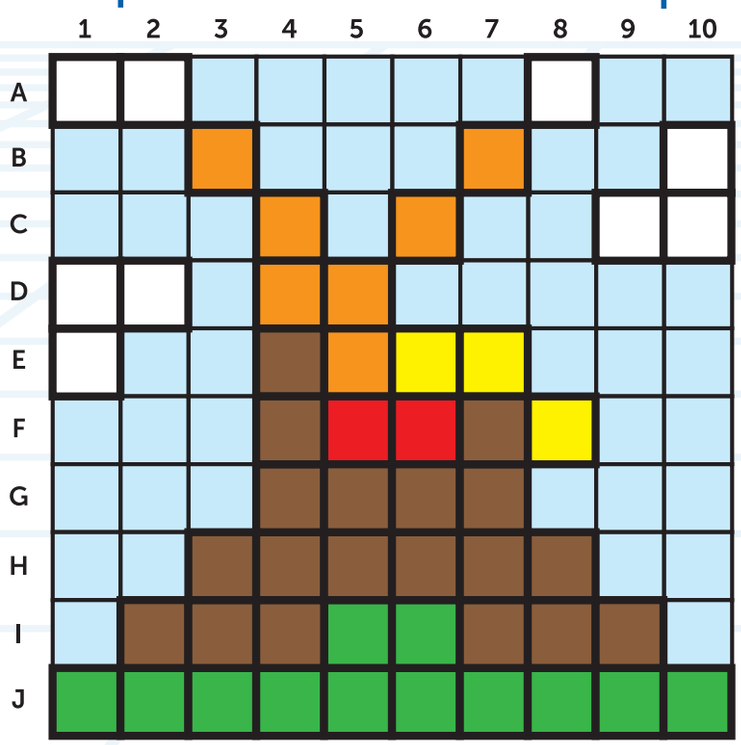
#5



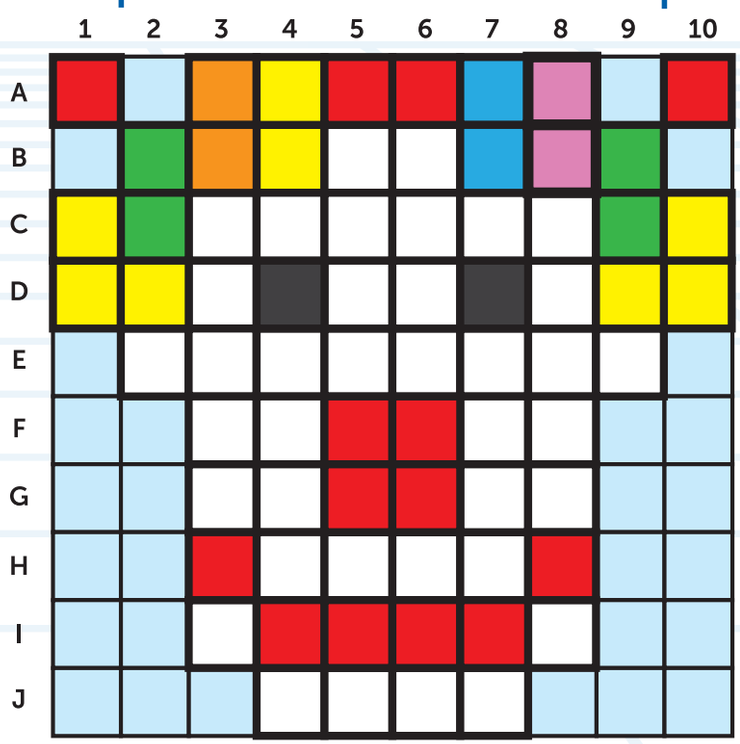
#6



#7



#8



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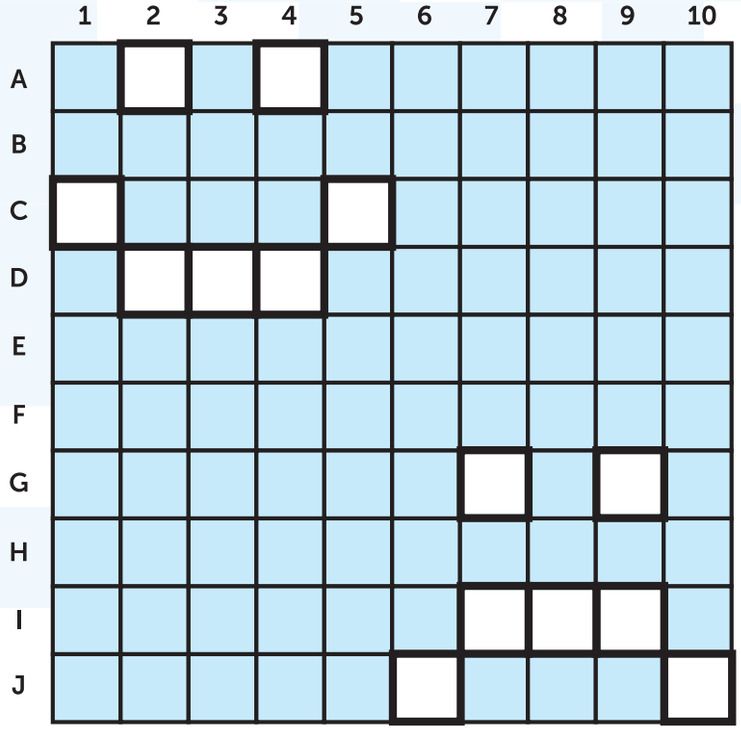
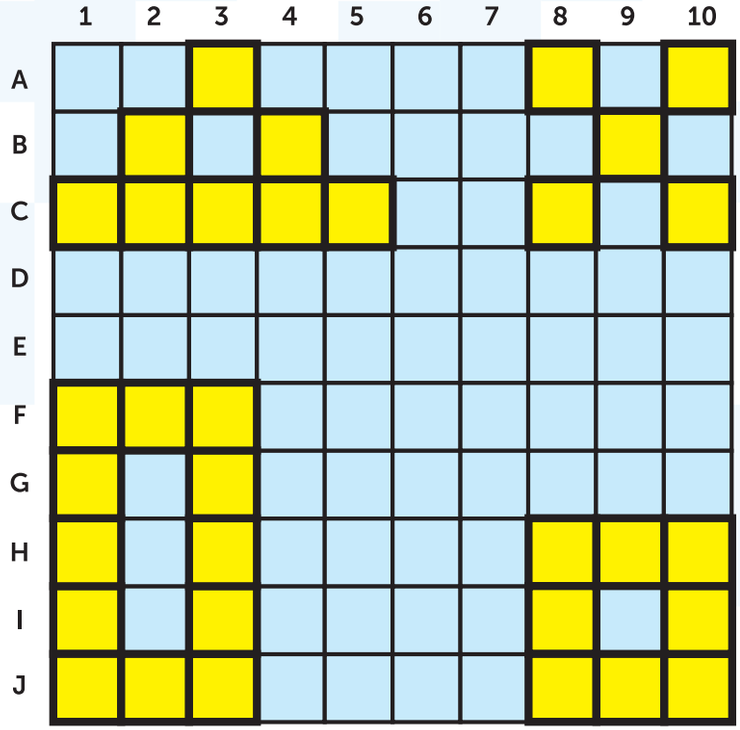
Coordinates Answer Key

Soluciones de las pruebas de coordenadas
Réponses de coordonnés
Koordinaten Antworten

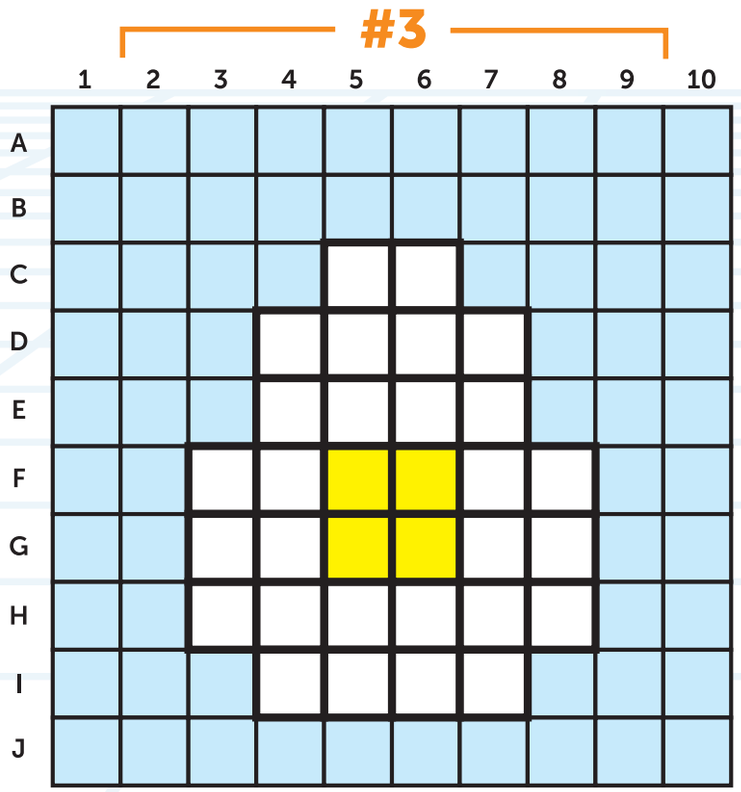
#1



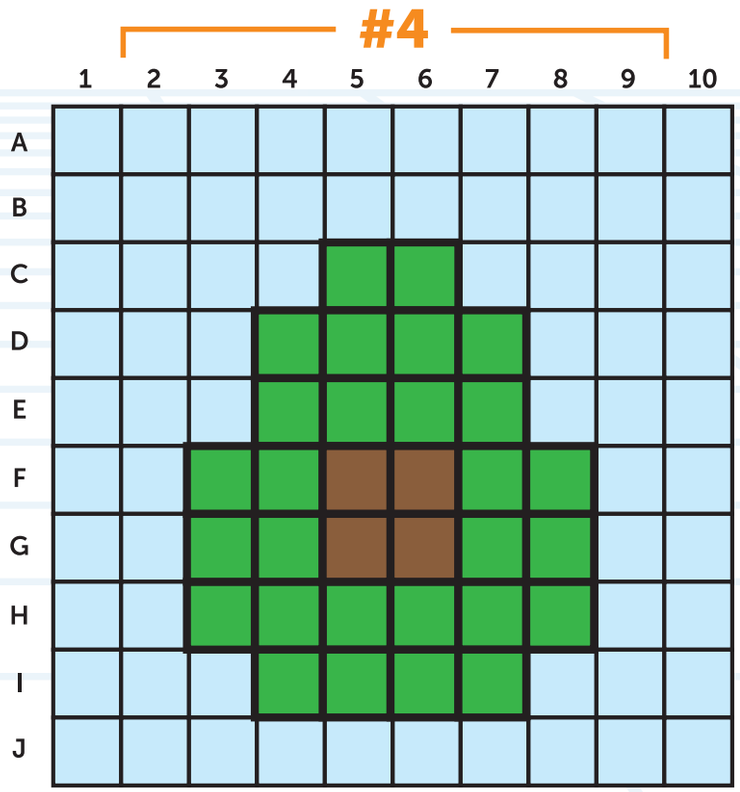
#2



#3



#4



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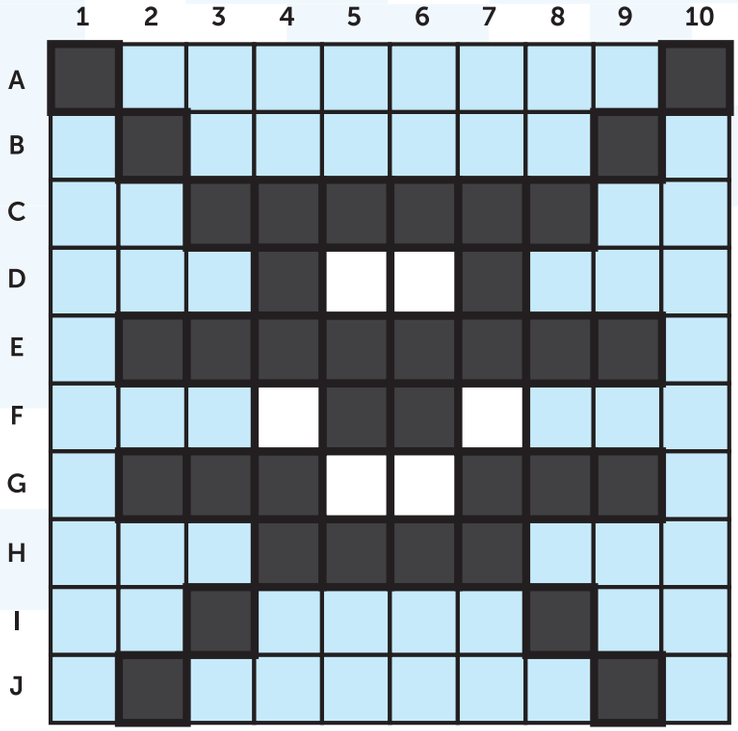
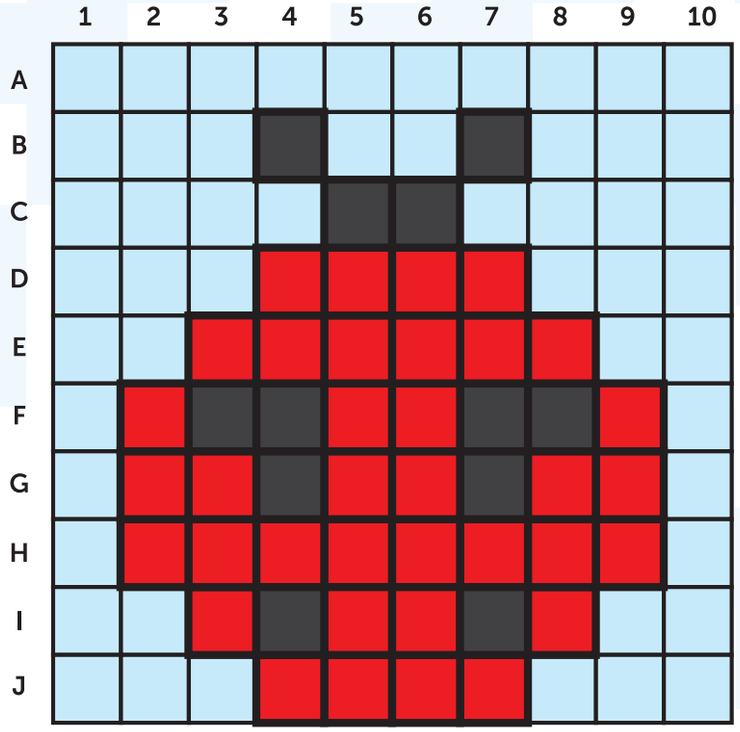
#5



#6



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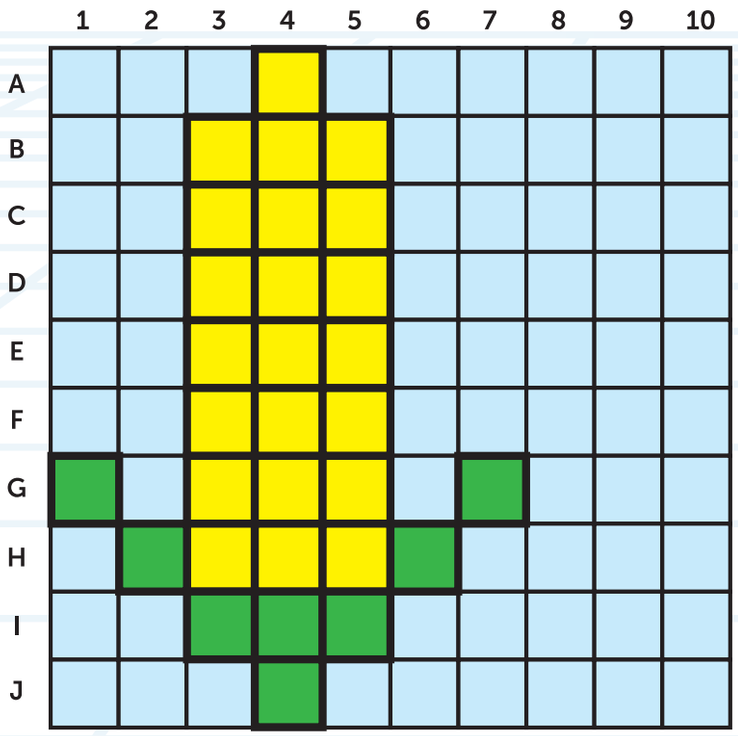
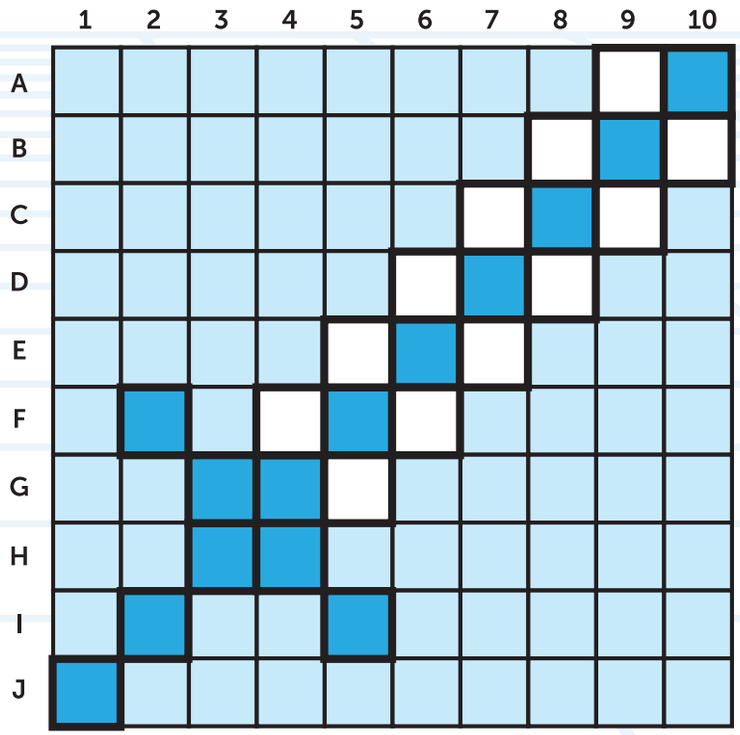


#8



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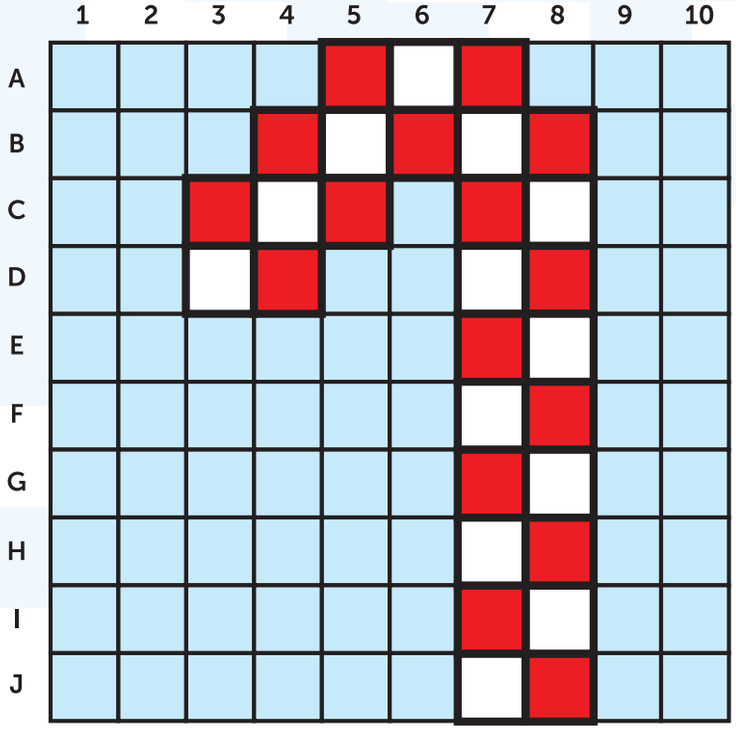
#9



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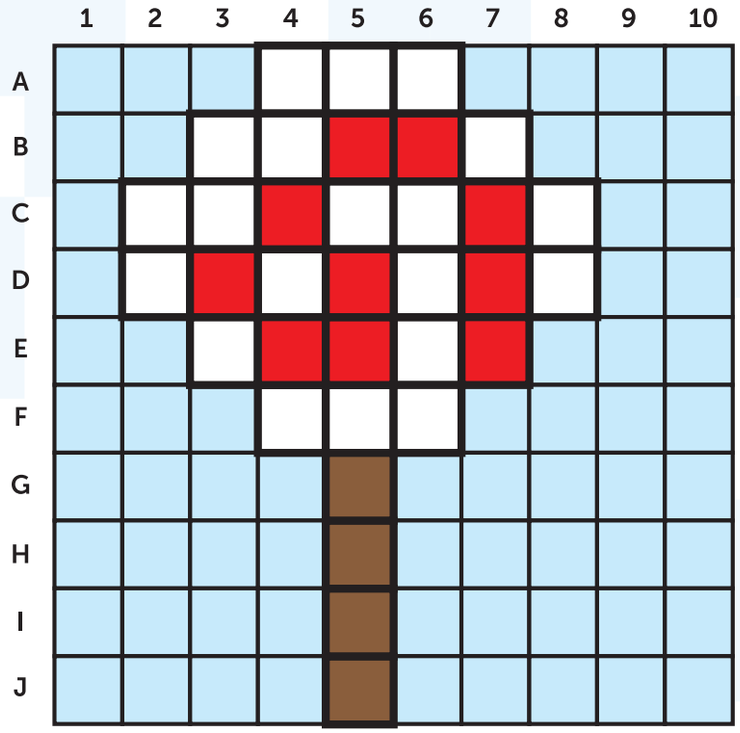

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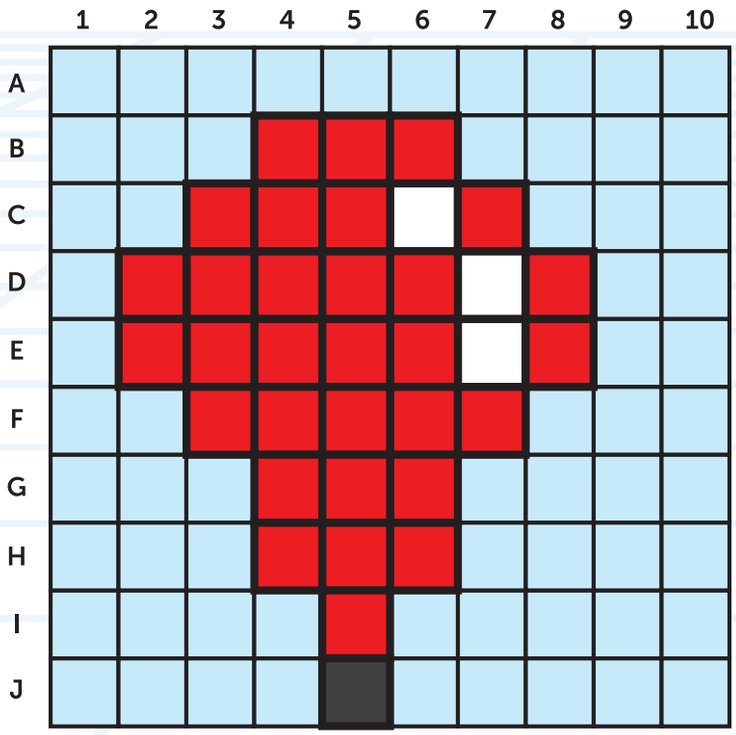

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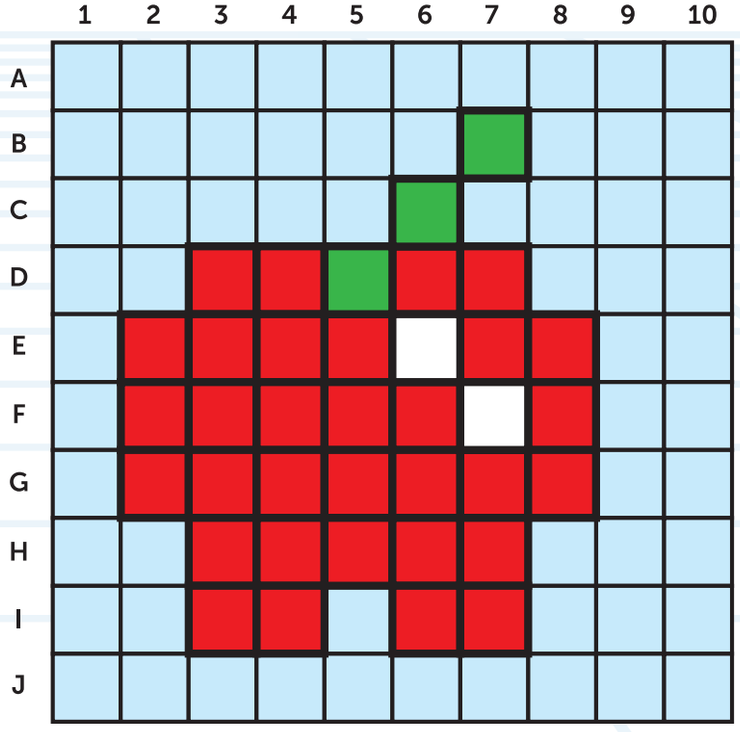

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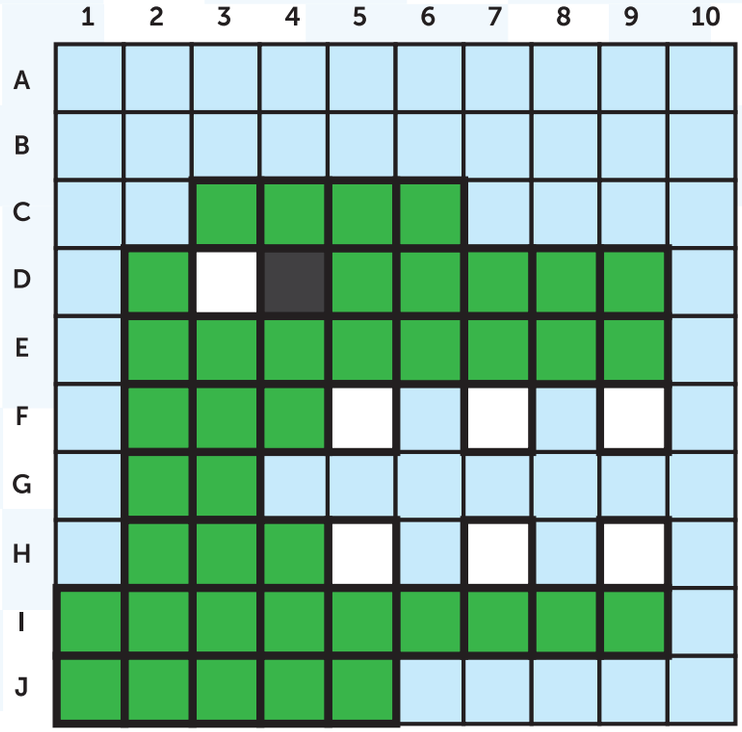

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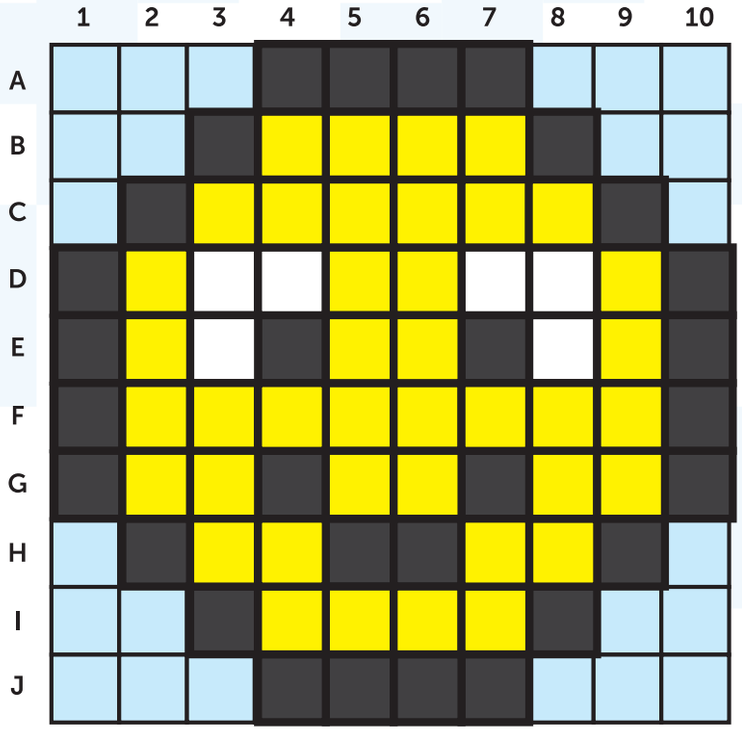

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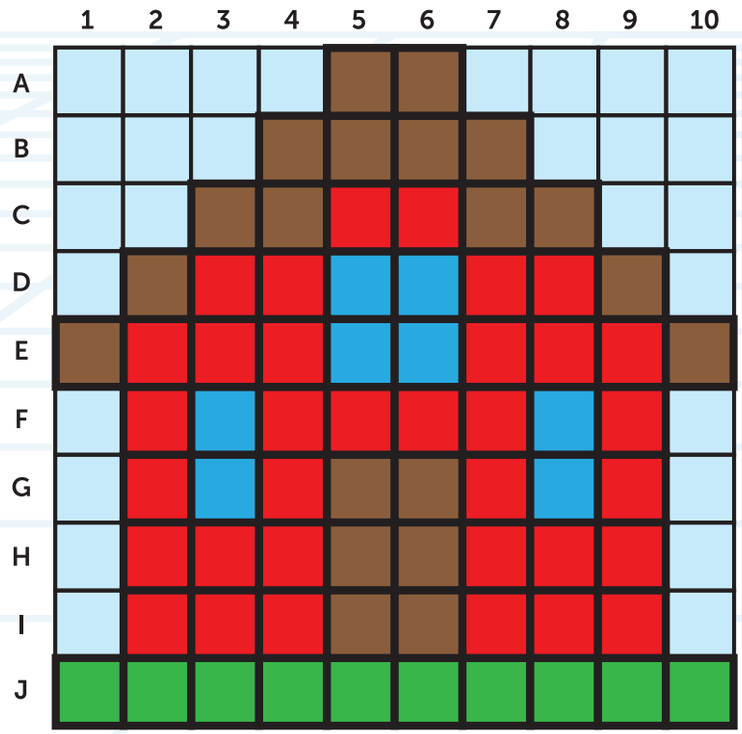

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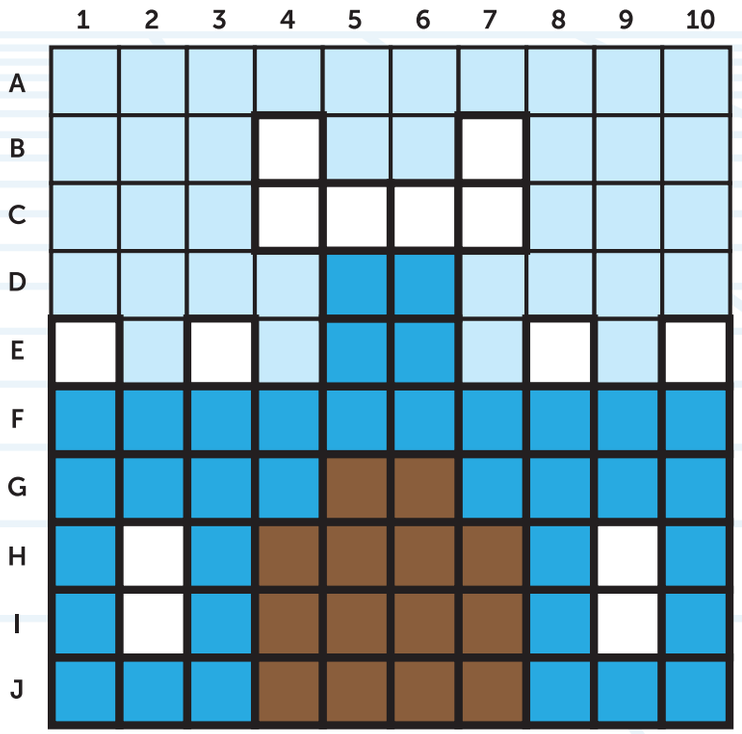

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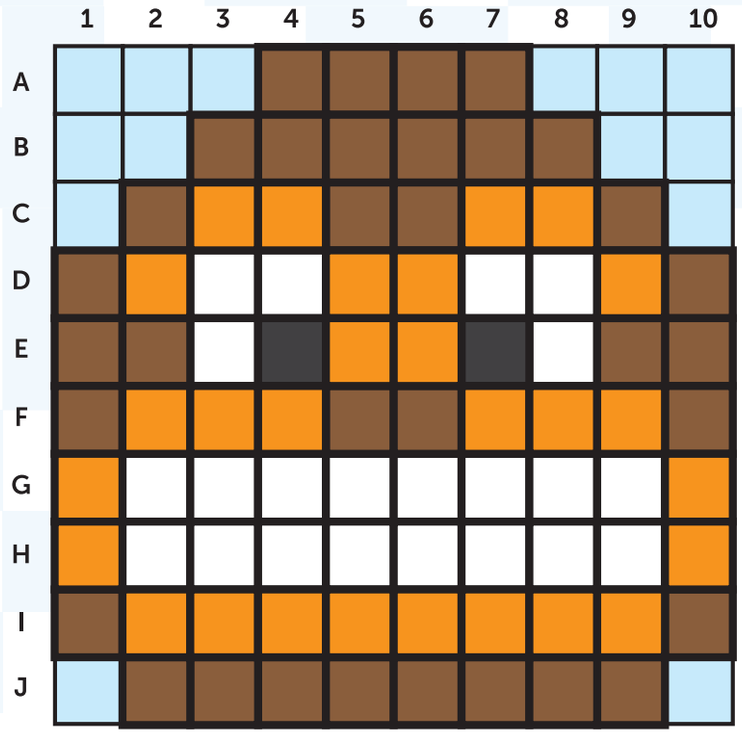

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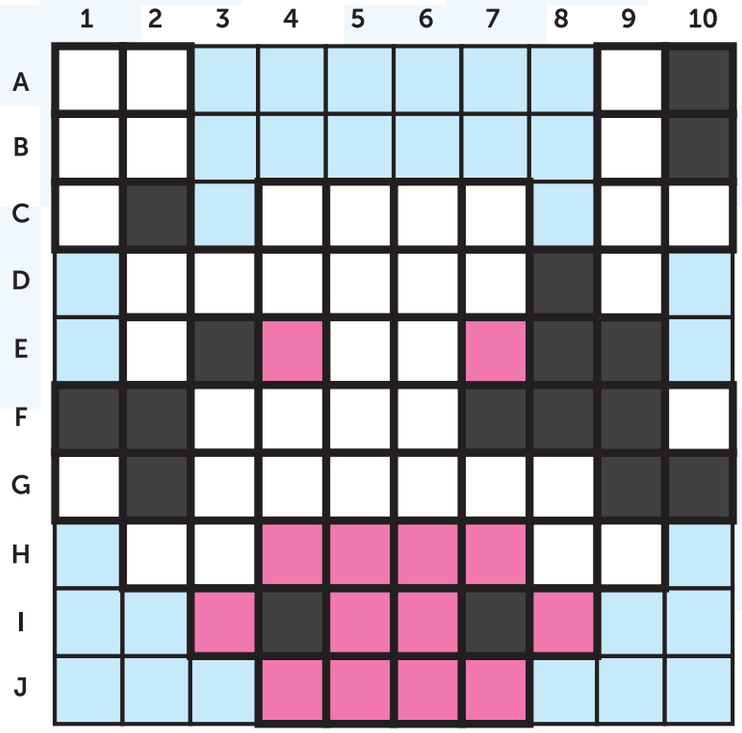

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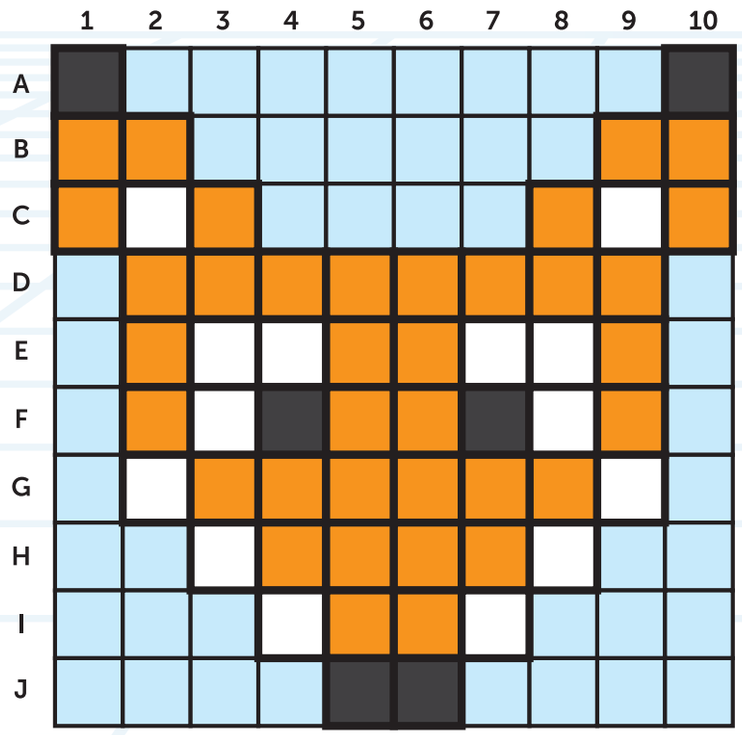

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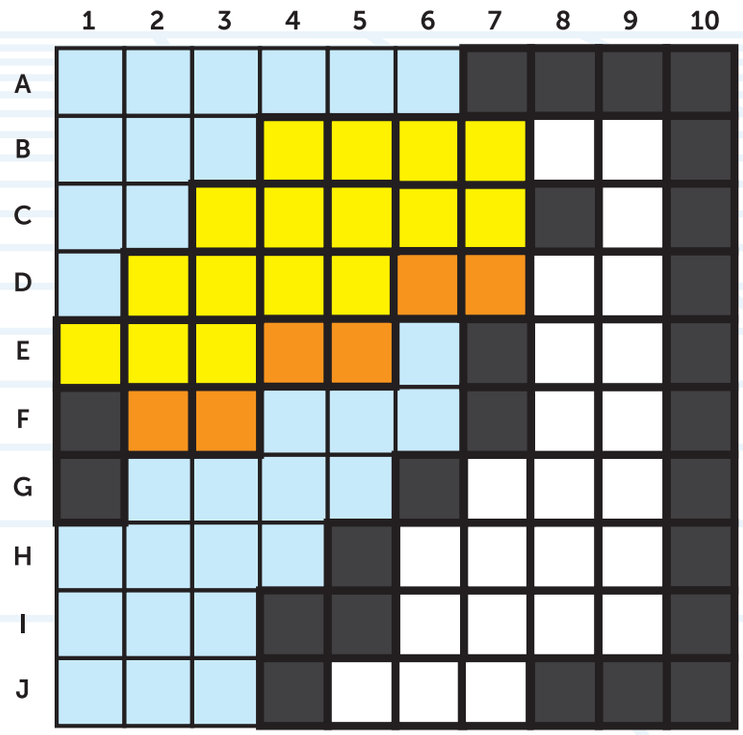

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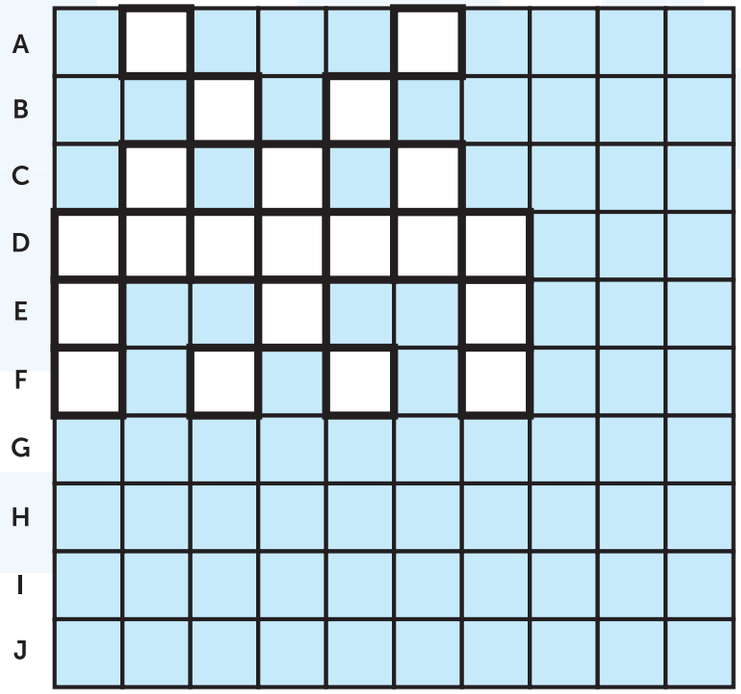
Coding Answer Key

Soluciones de las pruebas de codificación
Réponses de programmation
Programmierantworten

#1



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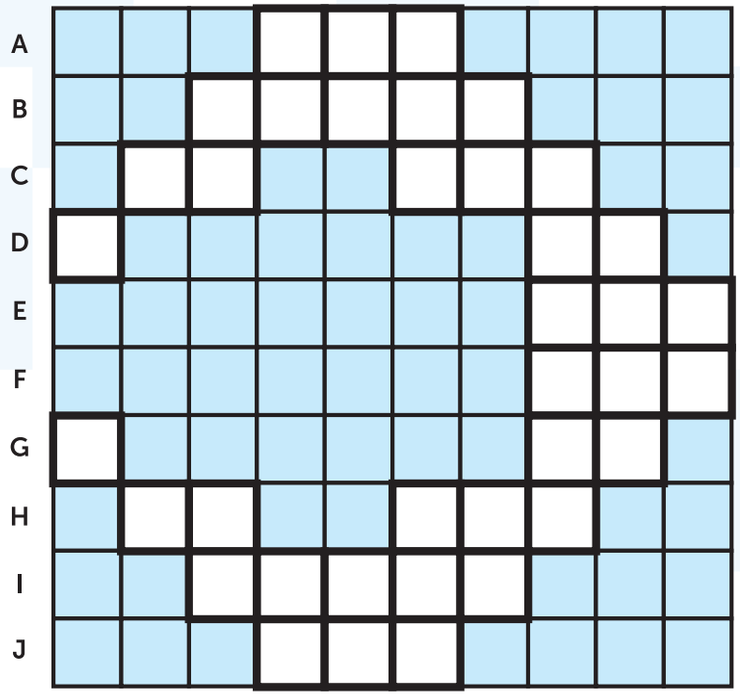

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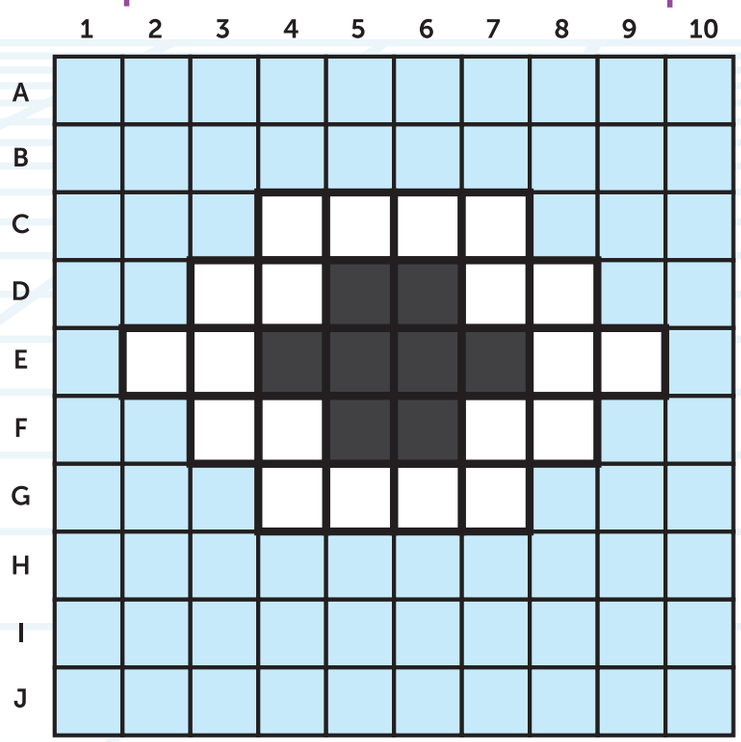

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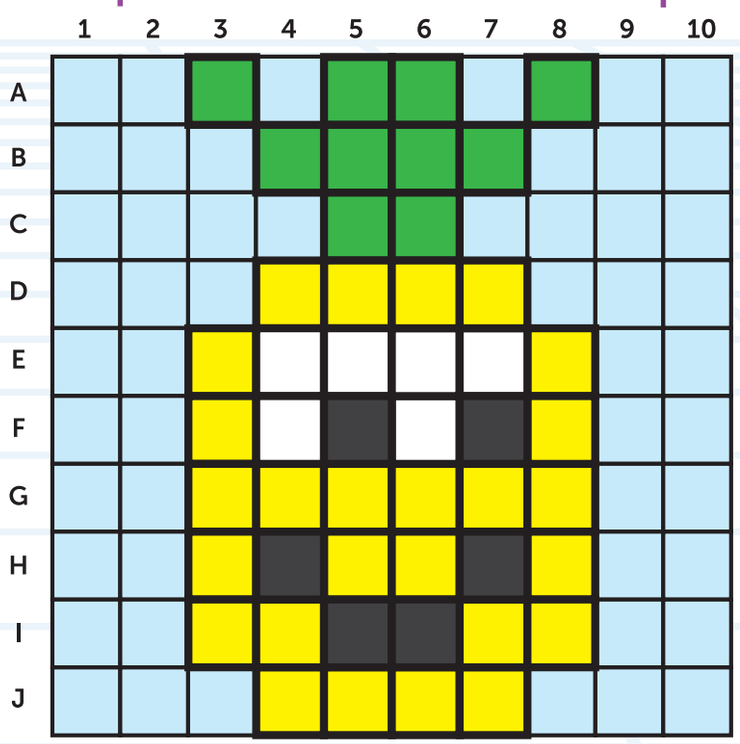

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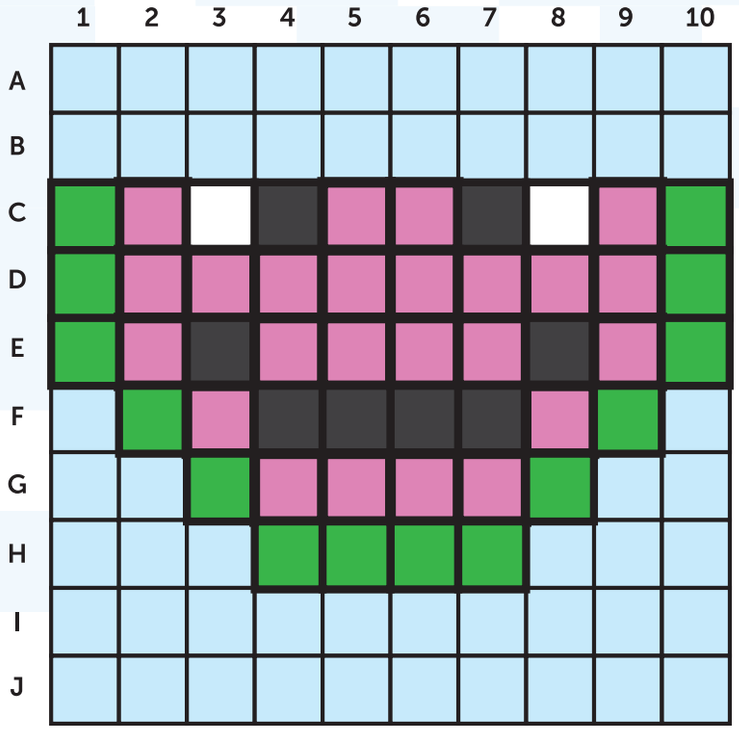

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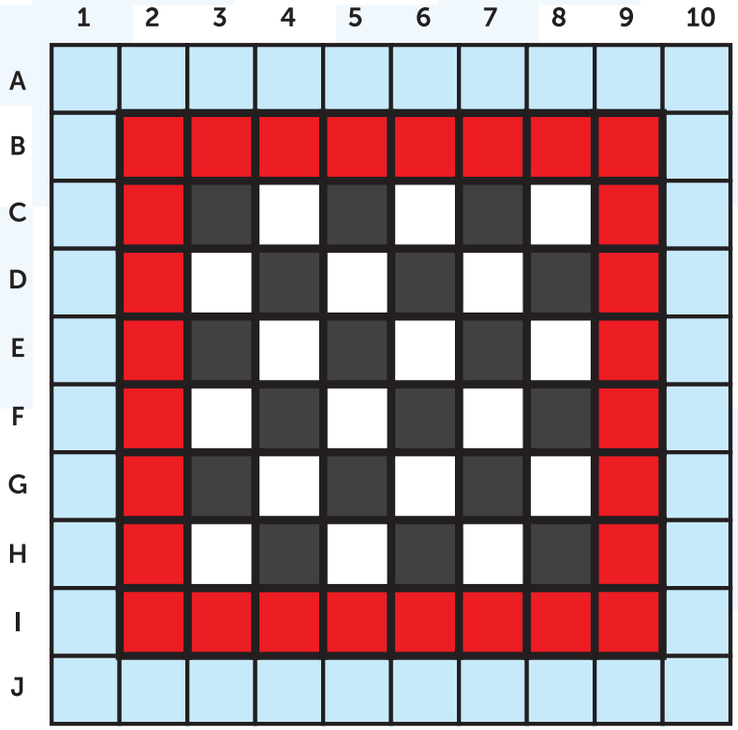

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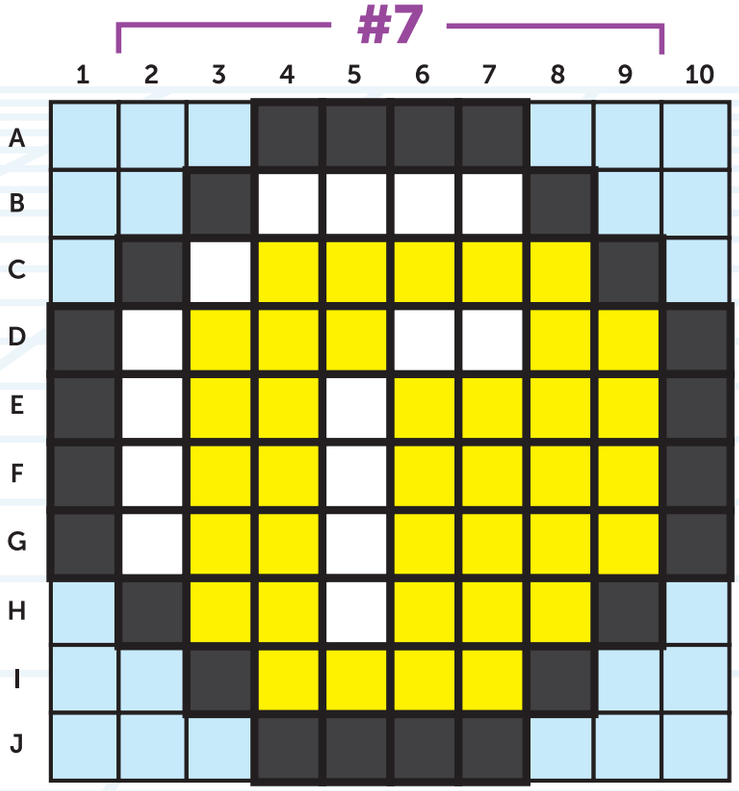

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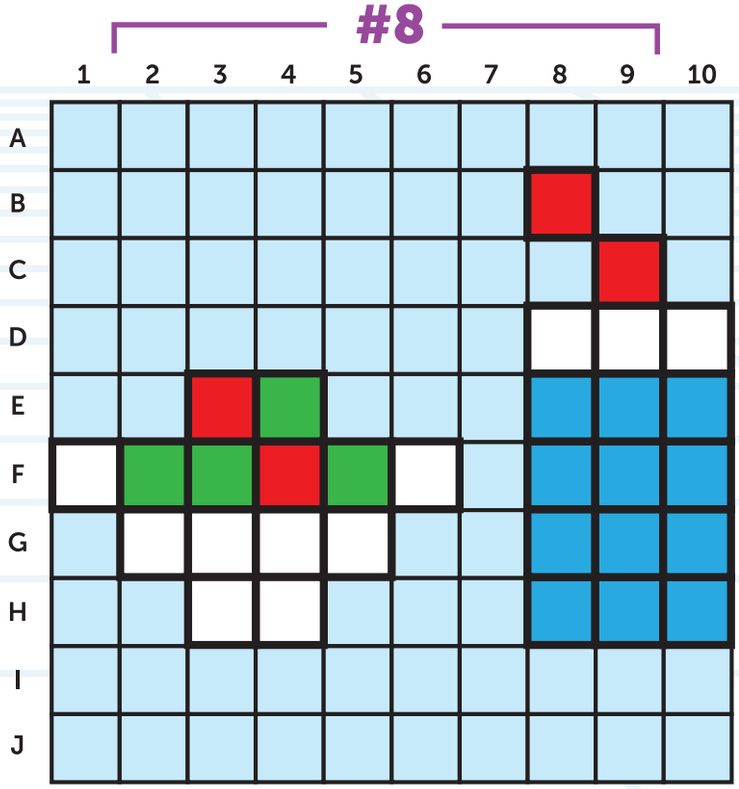

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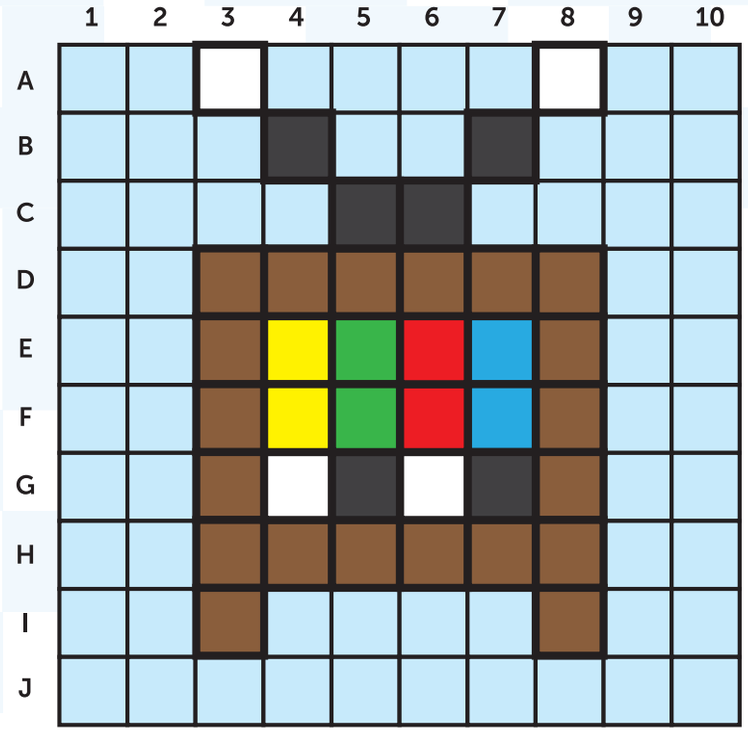

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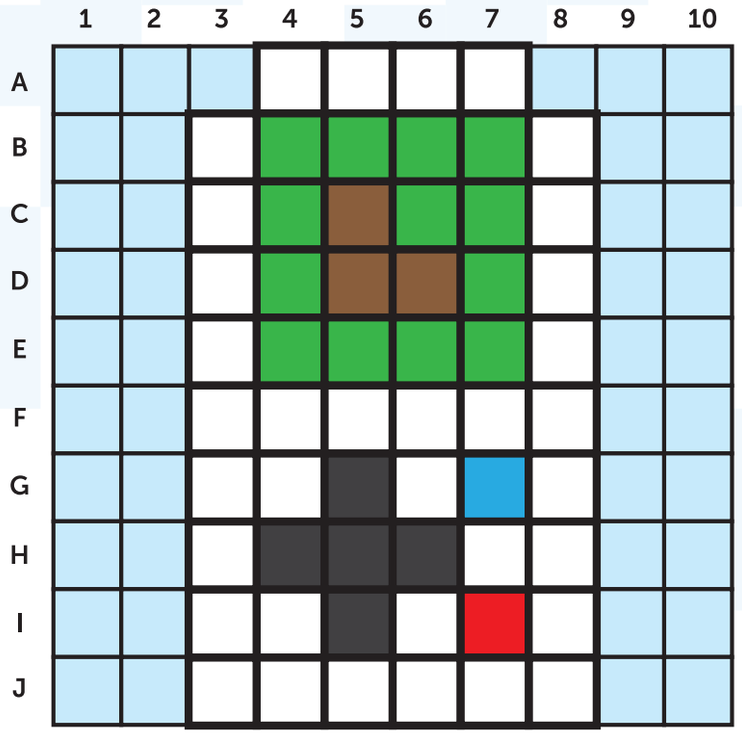

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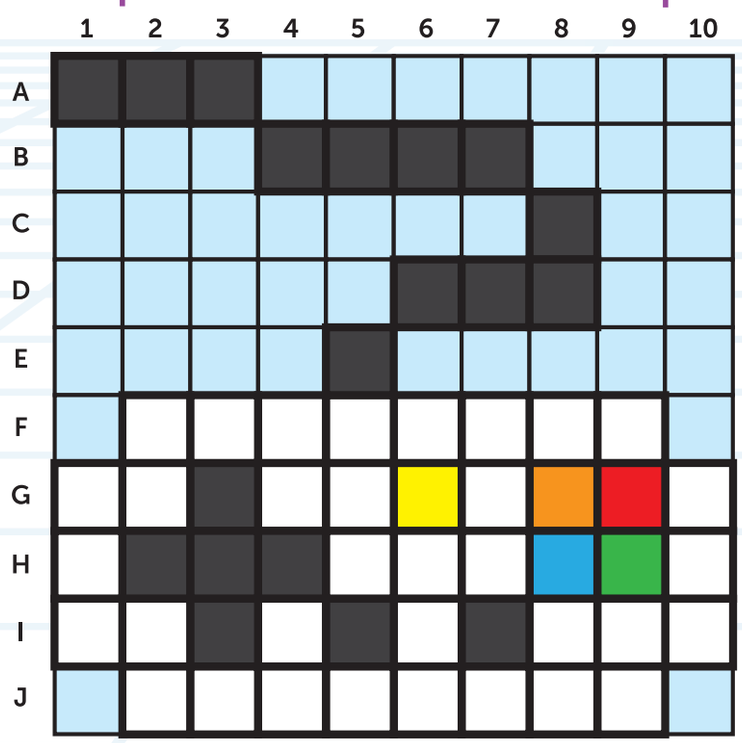

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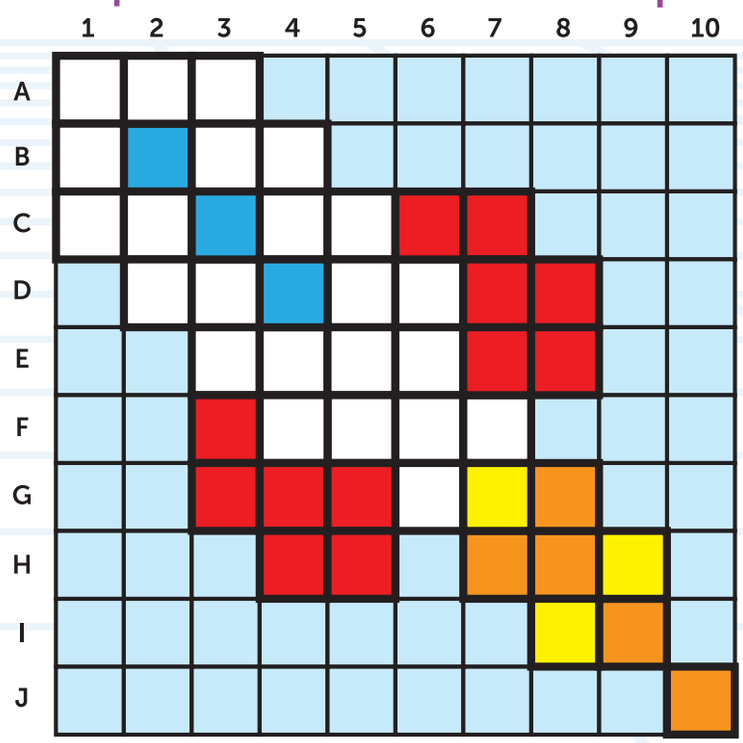

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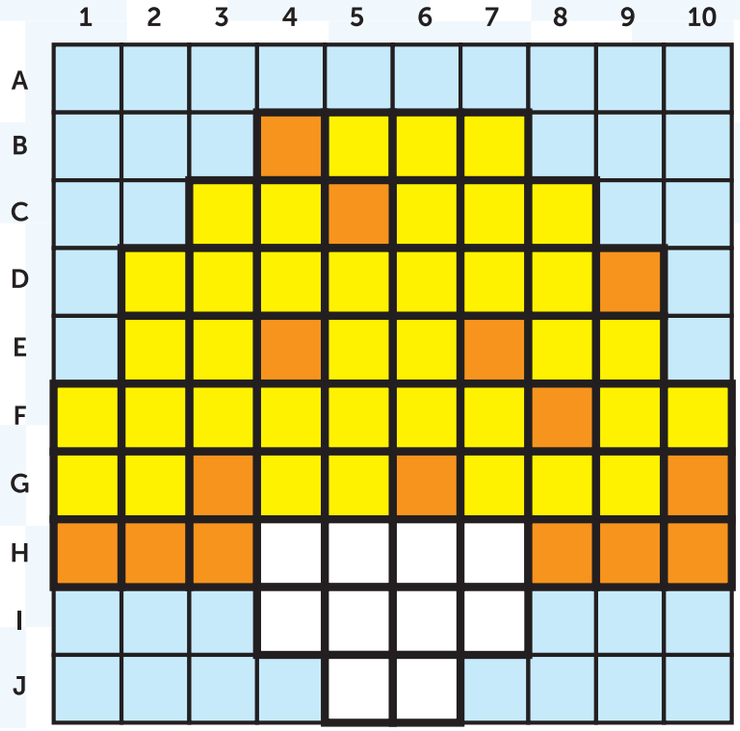

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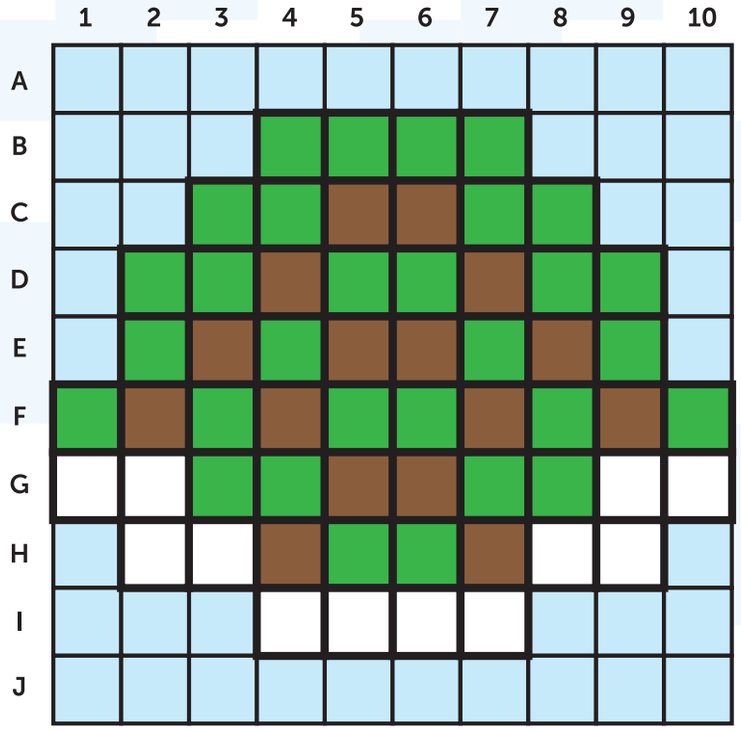

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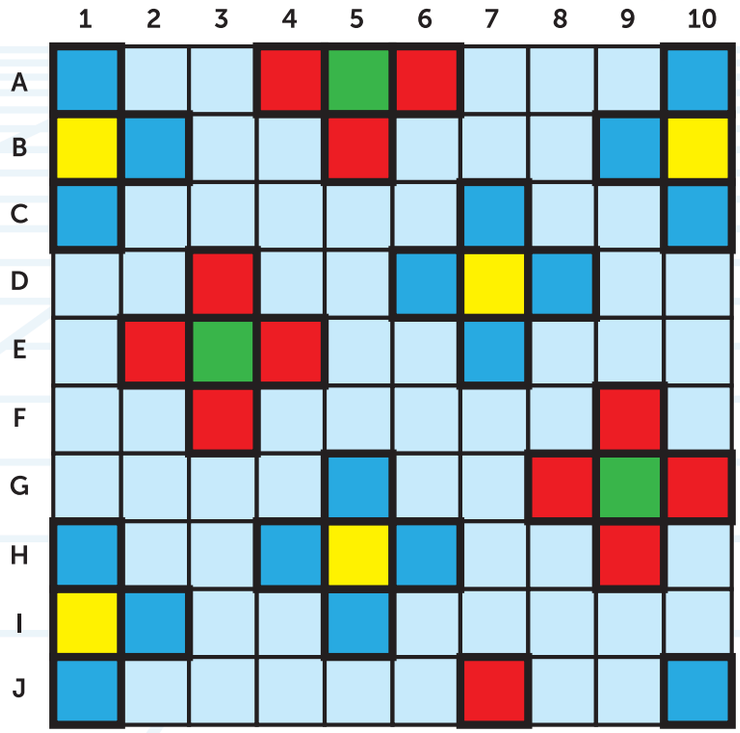

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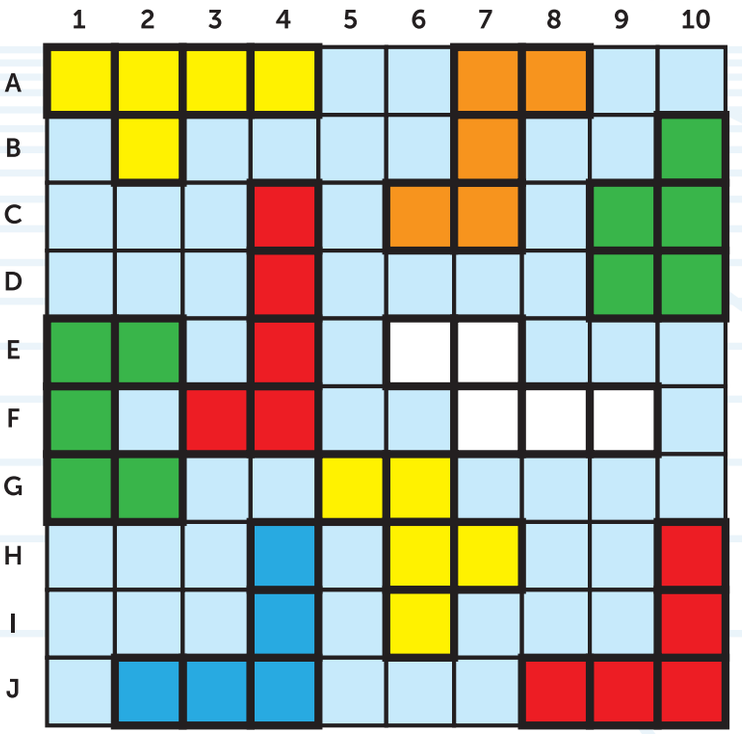

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ES

Relaciona y construye

Construye tu obra de pixel art copiando las imágenes de la cuadrícula. Sigue las coordenadas: el eje x está representado por números y el eje y por letras. Utiliza el dedo para marcar el sitio exacto sobre la página y coloca uno a uno los cubos correspondientes sobre la cuadrícula. Estas pruebas iniciales están pensadas para que disfrutes creando patrones con los cubos-píxeles que representan imágenes de dos dimensiones.

Colorea según los números

En estas pruebas, cada color está representado por un número distinto. Utiliza la fórmula para colocar los cubos de colores en la cuadrícula. Si los colocas correctamente, los patrones de píxeles formarán una imagen increíble.

Coordenadas

Ahora que ya entiendes los conceptos básicos de la construcción con píxeles, vamos a probar con gráficas abstractas. Coloca los cubos según las coordenadas impresas en la página: sin ningún elemento visual que te ayude. Recuerda que las coordenadas siempre empiezan por una letra seguida de un número. El lugar en el que se encuentran estos dos elementos es donde debes colocar el cubo en la cuadrícula.

Codificación

La codificación es la creación de secuencias de comandos, llamadas algoritmos o secuencias de código, que son las órdenes con las que se dicta al ordenador lo que tiene que hacer. En resumen, los ordenadores se programan mediante la codificación para que actúen de la manera que el usuario, es decir, tú, determine. ¿Sabías que puedes aprender las bases de la codificación sin necesidad de usar un ordenador? Eso es: Puedes adquirir experiencia de codificación resolviendo pruebas lógicas de clasificación de información, como estas.

FR

Associe et construis

Construis ton œuvre d'art du pixel en reproduisant les images de la grille. Suis les coordonnées : l'axe x est représenté par les nombres et l'axe y par les lettres. Avec ton doigt, marque l'emplacement exact sur la page pour reproduire l'image, un cube à la fois, sur la grille. Ces activités pour les débutants sont axées sur le plaisir de créer et d'assembler les cubes de pixel pour représenter des images 2D.

Coloriage à numéros

Pour ces activités, chaque couleur est représentée par un chiffre différent. Utilise la formule pour poser les cubes de couleur sur la grille. Une fois positionnés correctement, les pixels dévoileront une image incroyable !

Coordonnées

Maintenant que tu as compris les concepts fondamentaux de l'art du pixel, passons à des activités de graphisme abstrait ! Place les cubes selon les coordonnées imprimées sur la page, sans aucune aide visuelle. N'oublie pas que les coordonnées commencent toujours par une lettre, suivie d'un chiffre. Tu dois placer tes cubes à l'intersection de la lettre et du chiffre !

Programmation

La programmation consiste en une série de commandes, appelées algorithme ou chaîne de codage, indiquant quoi faire à l'ordinateur. En résumé, le codage permet de programmer un ordinateur pour qu'il agisse de manière prédéterminée, selon ce que l'utilisateur a choisi. Savais-tu que tu peux apprendre les bases de la programmation sans ordinateur ? Et oui, tu peux acquérir une expérience de programmation cruciale en résolvant des puzzles logiques de tri d'informations comme ceux-ci !

DE

Zuordnen und legen

Orientiere dich beim Legen deiner Pixel-Kunstwerke an den Angaben in den Kästchen. Gehe nach den Koordinaten vor: Auf der X-Achse sind die Zahlen, auf der Y-Achse die Buchstaben angegeben. Halte deinen Finger auf der jeweiligen exakten Kästchenposition auf der Seite und lege dann die Würfel einzeln in die Kästchen. In diesen Aufgaben zum Einstieg kannst du mit den Pixel-Würfeln tolle zweidimensionale Bilder legen.

Malen nach Zahlen

Bei diesen Aufgaben steht jede Zahl für eine bestimmte Farbe. Das Schema zeigt dir, welche Farbwürfel in welche Kästchen gehören. Hast du das Muster richtig gelegt, entsteht aus den Pixeln ein tolles Bild!

Koordinaten

Nachdem du jetzt die Grundlagen der Gestaltung mit Pixeln kennst, probiere doch einmal abstrakte graphische Herausforderungen! Lege die Würfel laut den auf der Seite aufgedruckten Koordinaten aus – ganz ohne Bildanleitung. Denke daran, dass die Koordinaten immer aus einem Buchstaben und einer Zahl bestehen. Dort, wo diese beiden Achsen eine Schnittstelle bilden, legst du einen Würfel ab! Gehe nach diesen Koordinaten vor und lege je einen Würfel an die Positionen in den Kästchen. Wenn du fertig bist, überprüfe deine Antwort auf der Rückseite der Anleitung!

Programmieren

Programmieren besteht aus einer Aneinanderreihung von Befehlen (auch Algorithmus bzw. Programmierreihe genannt), die einem Computer sagen, was er tun soll. Kurz gesagt: Das Programm gibt dem Computer vor, genau das zu tun, was du, der Nutzer, bestimmt. Wusstest du, dass du dir die Grundlagen des Programmierens auch ohne einen Computer aneignen kann? Du hast richtig gehört: Du kannst wichtige Programmiererfahrungen machen, indem du Denkaufgaben wie diese löst, bei denen du Informationen verarbeiten musst!

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ES

Relaciona y construye
Niveles de dificultad: verde = fácil, amarillo = intermedio, rojo = difícil.
Todas las piezas que necesitas para completar tu obra de arte sobre la cuadrícula.
El aspecto que tendrá tu obra cuando la termines.
Recuerda que debes seguir las coordenadas, la prueba C-3 es perfecta para empezar.

Colorea según los números
Niveles de dificultad: verde = fácil, amarillo = intermedio, rojo = difícil.
Sigue este patrón y coloca tus cubos en la cuadrícula.
Consulta la clave de soluciones en el reverso para comprobar que tu obra está bien hecha.
La fórmula para saber qué colores corresponden a cada número en la cuadrícula.

Coordenadas
Niveles de dificultad: verde = fácil, amarillo = intermedio, rojo = difícil.
Sigue estas coordenadas, colocando un cubo en cada posición indicada en la cuadrícula. Cuando acabes, comprueba tu respuesta en el reverso de la guía.
El color de los cubos que necesitas para completar la imagen.

Codificación
Niveles de dificultad: verde = fácil, amarillo = intermedio, rojo = difícil.
Clave del código de esta prueba.
Te muestra en qué lugar de la cuadrícula debes colocar los cubos (filas A-J). En cada secuencia de código, el símbolo (>) representa un espacio en blanco. Coloca un cubo en el cuadrado marcado con el símbolo correspondiente de la clave. Consulta el ejemplo más abajo.

FR

Associe et construis
Niveau de difficulté : vert = facile, jaune = moyen, rouge = difficile.
Toutes les pièces nécessaires pour créer ton œuvre d'art sur la grille
Image de ton œuvre d'art terminée N'oublie pas de suivre les coordonnées. Tu peux commencer par « C-3 » par exemple !

Coloriage à numéros
Niveau de difficulté : vert = facile, jaune = moyen, rouge = difficile.
Suis ce motif en plaçant tes cubes sur la grille. Vérifie la réponse au dos pour voir si tu as bien réussi ton œuvre d'art !
Légende d'association des couleurs aux nombres sur la grille

Coordonnées
Niveau de difficulté : vert = facile, jaune = moyen, rouge = difficile.
Suis ces coordonnées en mettant un cube à chaque position mentionnée sur la grille. Lorsque tu as terminé, vérifie la réponse au dos du guide !
Couleurs des cubes nécessaires pour créer l'image

Programmation
Niveau de difficulté : vert = facile, jaune = moyen, rouge = difficile.
Légende de programmation de cette activité.
Indique où placer les cubes sur la grille (rangées A à J). Dans chaque chaîne de codage, le symbole > représente une case vide. Place un cube à l'endroit indiqué par le symbole applicable de la légende. Regarde l'exemple ci-dessous !

DE

Zuordnen und legen
Schwierigkeitsgrad: Grün = Anfänger, Gelb = Fortgeschrittener, Rot = Profi.
Alle Teile, die du zum Legen deines Kunstwerks in den Kästchen benötigst.
So sollte dein fertiges Kunstwerk später aussehen.
Beachte immer die Koordinaten-Angaben. Beginne am besten bei C-3!

Malen nach Zahlen
Schwierigkeitsgrad: Grün = Anfänger, Gelb = Fortgeschrittener, Rot = Profi.
Lege die Würfel gemäß diesem Muster in die Kästchen. Überprüfe dein Kunstwerk anhand des Lösungsschlüssels auf der Rückseite!
Das Schema für die richtige Zuordnung der Farben zu den Zahlen in den Kästchen.

Koordinaten
Schwierigkeitsgrad: Grün = Anfänger, Gelb = Fortgeschrittener, Rot = Profi.
Gehe nach diesen Koordinaten vor und lege je einen Würfel an die Positionen in den Kästchen. Wenn du fertig bist, überprüfe deine Antwort auf der Rückseite der Anleitung!
Die Farben der für das Bild benötigten Würfel.

Programmieren
Schwierigkeitsgrad: Grün = Anfänger, Gelb = Fortgeschrittener, Rot = Profi.
Der Programmierschlüssel für diese Aufgabe.
Zeigt, wo in den Kästchen die Würfel gelegt werden sollen (Reihen A-J). In jeder Programmierreihe steht das Caret (>) für ein Leerzeichen. Setze die Würfel gemäß dem Programmierschlüssel in die entsprechenden Kästchen. (Siehe nachstehendes Beispiel)

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FR: Scannez ici pour des activités supplémentaires !
DE: Für weitere Aktivitäten einfach hier scannen!

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