

Siniša Hrga

SUDOKU

za radoznalce i natjecatelje

radna bilježnica s riješenim primjerima
za učenike od 1. do 4. razreda

1. izdanje



2024.



NAKLADNIK
Alfa d. d. Zagreb
Nova Ves 23a

ZA NAKLADNIKA
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LEKTURA I KOREKTURA
Kristina Ferenčina

LIKOVNO I GRAFIČKO OBLIKOVANJE
Maja Draganić

ILUSTRACIJE
Adobe Stock

TISAK
Stega tisak

Odobrila Agencija
za odgoj i obrazovanje:
KLASA: 602-05/24-01/47,
URBROJ: 561-05-01/09-24-2

Draga učenice, dragi učenice,

pred tobom je radna bilježnica *Sudoku za radoznalce i natjecatelje* namijenjena učenicima od 1. do 4. razreda osnovne škole, kao i svim početnicima.

Vidjet ćeš, sudoku je vrlo zanimljiva i jednostavna igra, a ova radna bilježnica donosi različite vrste zadataka i uz pomoć riješenih primjera moći ćeš učiniti svoje prve korake u rješavanju sudokua.

Radna bilježnica podijeljena je na šesnaest poglavlja. Prva tri poglavlja odnose se na magične kvadrate, a zatim slijede tvoji prvi pravi koraci u poglavljima s klasičnim sudoku-zadacima. Osim toga tu su i poglavlja koja se bave posebnim vrstama sudoku-zadataka poput dijagonalnih, susjednih, zbrojeva, nestandardnih likova, do 12-34-56 i kropki sudoka.

Rješavanjem zadataka u ovoj radnoj bilježnici razvijat ćeš svoje matematičke vještine, logiku, strpljenje, koncentraciju, vještine kreativnog mišljenja i rješavanja problema.

Želim ti uspješno i zabavno rješavanje!

Siniša Hrga



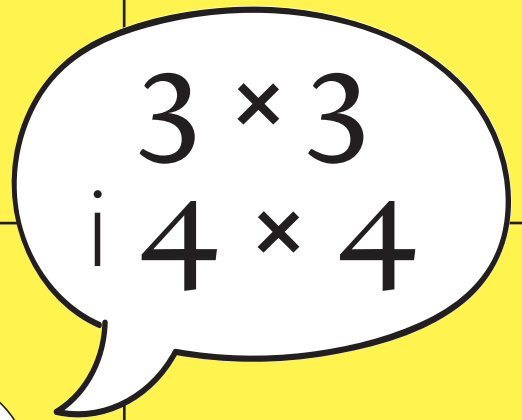
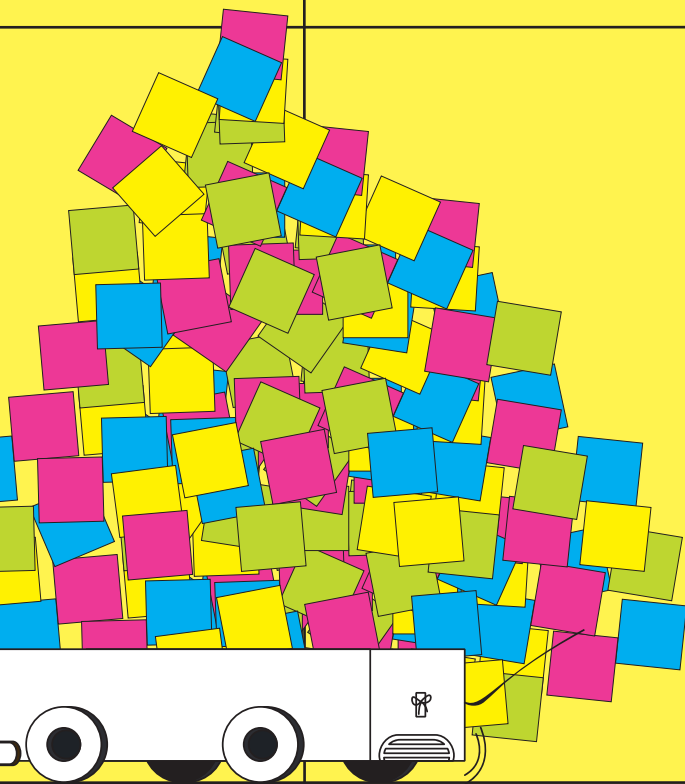
Sadržaj:

6 Magični kvadrati u bojama 3×3 i 4×4	20 Magični kvadrati s likovima 4×4 i 5×5	28 Magični kvadrati s brojevima 4×4 i 5×5	42 Klasični sudoku 4×4
48 Klasični dijagonalni sudoku 4×4	54 Nestandardni likovi 5×5	62 Nestandardni dijagonalni likovi 5×5	68 Zadatci 6×6
82 Nestandardni likovi 6×6	92 Sudoku 12-34-56 6×6	98 Par nepar sudoku 6×6	106 Susjedni sudoku 6×6
114 Niz sudoku 6×6	122 Zbrojevi V X 6×6	128 Zbrojevi 6×6	134 Kropki 6×6

142
Rješenja

Magični kvadrati u bojama





3×3
i 4×4

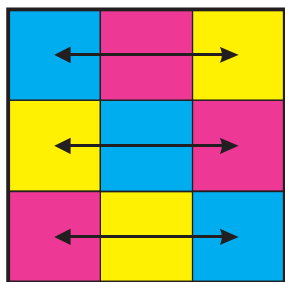
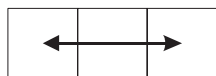
Prije rješavanja sudoku zadatka malo ćemo se poigrati magičnim kvadratima.

Koristeći se ovim trima bojama pronađi koja boja nedostaje.

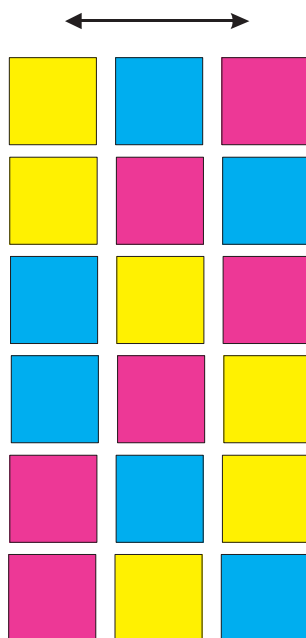


Pri rješavanju magičnih kvadrata u boji treba paziti na to da se ne pojave dvije iste boje u nekom stupcu ili retku.

REDAK



ISPRAVNO



POGREŠNO

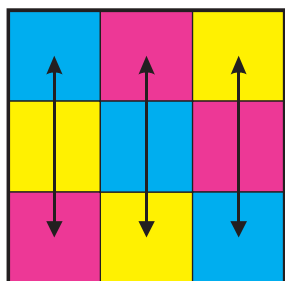


U ovom retku dva su polja žute boje.

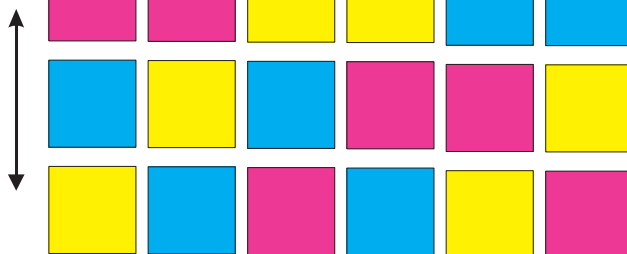


U ovom retku dva su polja plave boje.

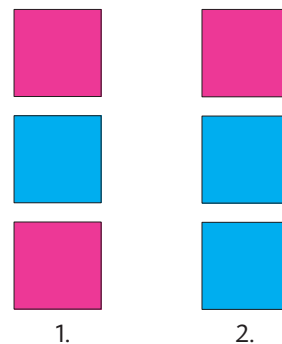
STUPAC



ISPRAVNO

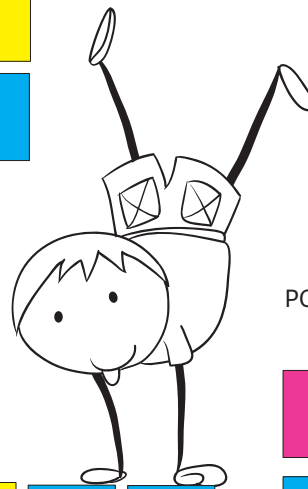


POGREŠNO



U prvom stupcu dva su polja roze boje.

U drugom stupcu dva su polja plave boje.

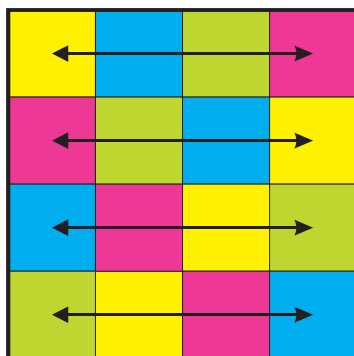
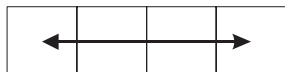


Koristeći se ovim četirima bojama
pronađi koja boja nedostaje.



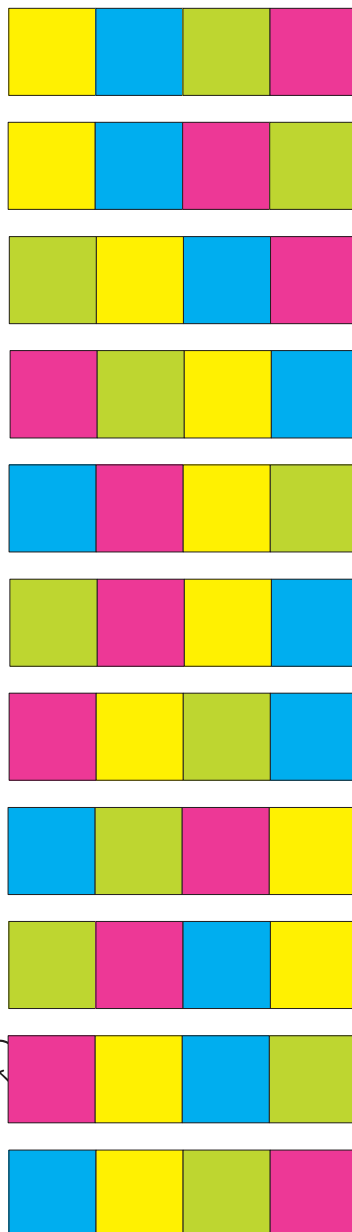
Pri rješavanju magičnih
kvadrata 4x4 u boji treba paziti
na to da se ne pojavi dvije ili
više istih boja u nekom stupcu
ili retku.

REDAK



Nekoliko primjera ispravnih
kombinacija boja u retku ▼

ISPRAVNO



POGREŠNO



U ovom retku dva su polja zelene
boje.



U ovom retku dva su polja plave
boje.



U ovom retku dva su polja plave
i dva polja roze boje.



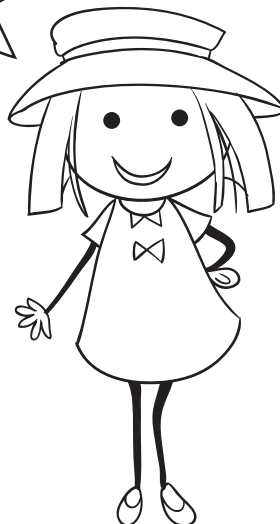
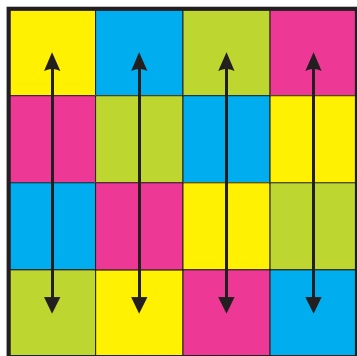
U ovom retku tri su polja plave
boje.



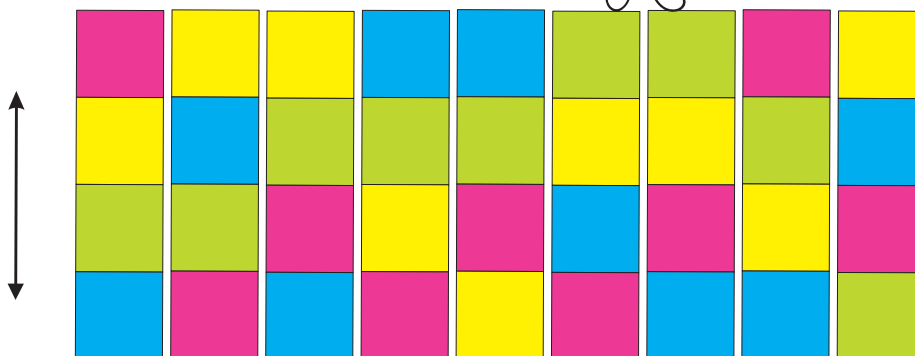
STUPAC



Nekoliko primjera
ispravnih kombinacija
boja u stupcu.



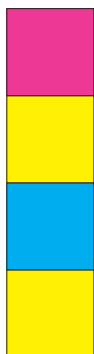
ISPRAVNO



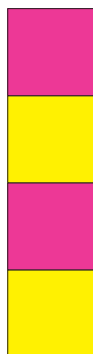
POGREŠNO



U ovom
stupcu dva
su polja roze
boje.



U ovom
stupcu dva
su polja žute
boje.



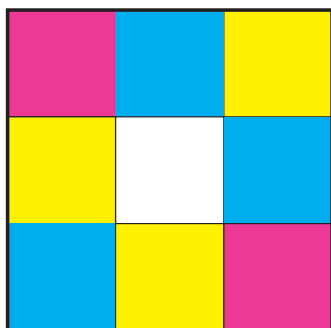
U ovom stupcu
dva su polja
roze i dva polja
žute boje.



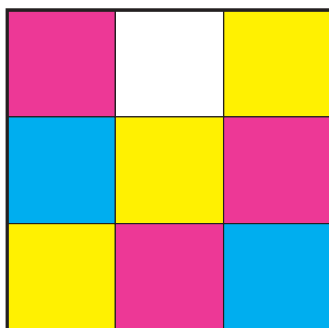
U ovom
stupcu tri su
polja plave
boje.



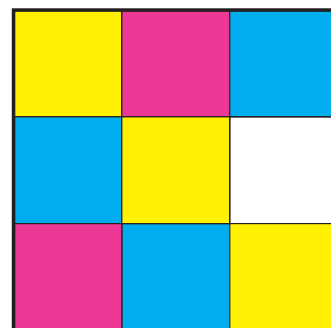
Koristeći se ovim trima bojama pronađi koja boja nedostaje.



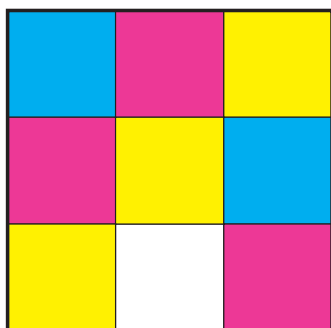
1



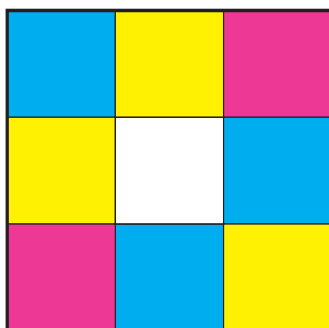
2



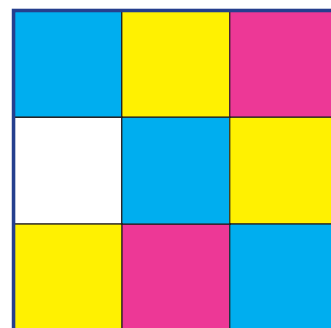
3



4



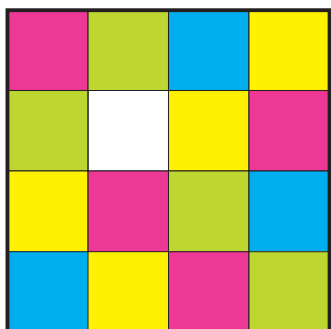
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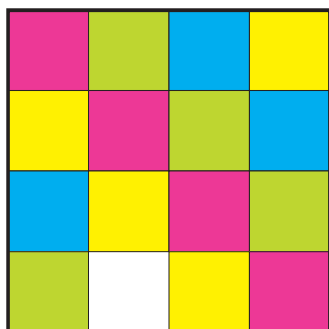
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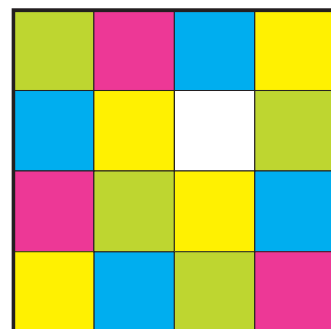
Koristeći se ovim četirima bojama pronađi koja boja nedostaje.



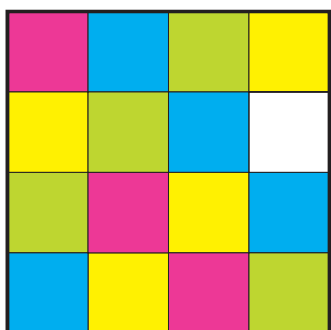
7



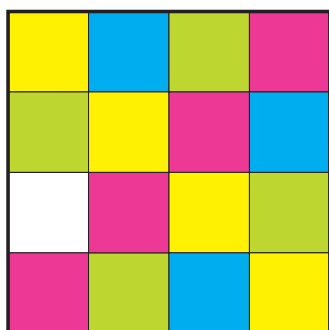
8



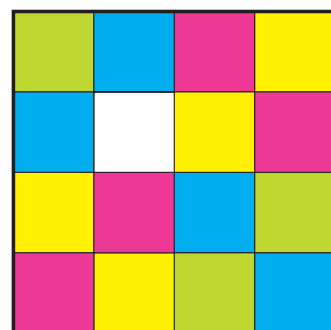
9



10

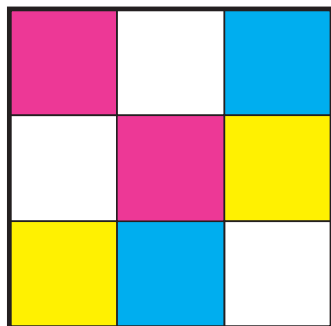


11



12

Koristeći zadane tri boje i naučena pravila pokušajmo zajedno riješiti 13. zadatak u kojem u svakom retku i svakom stupcu nedostaje jedna boja.



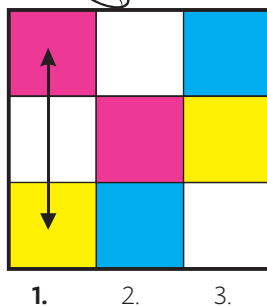
13

Ovaj zadatak možemo riješiti na dva načina:

- rješavati samo stupce
- rješavati samo retke.

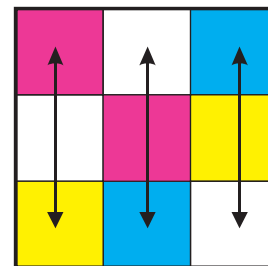


U prvom su stupcu roza i žuta boja, te zaključujemo da nedostaje plava. (korištene su plava, roza i žuta boja)

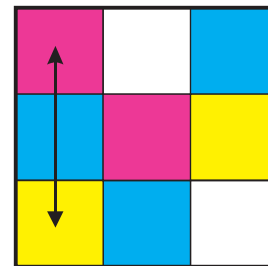


1. 2. 3.

Koristeći se ovim trima bojama pronadi koje boje nedostaju.

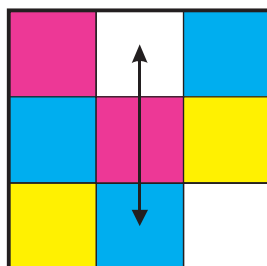


1. 2. 3.

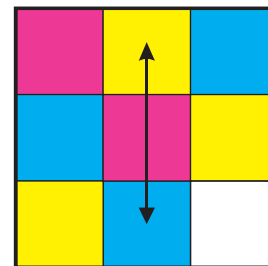


1. 2. 3.

U drugom su stupcu roza i plava boja, te zaključujemo da nedostaje žuta.

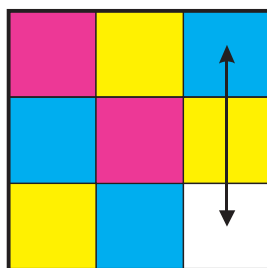


1. 2. 3.

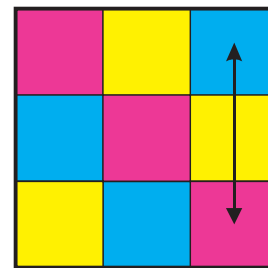


1. 2. 3.

I na kraju nam je ostao 3. stupac u kojem su plava i žuta boja, te zaključujemo da nedostaje roza.

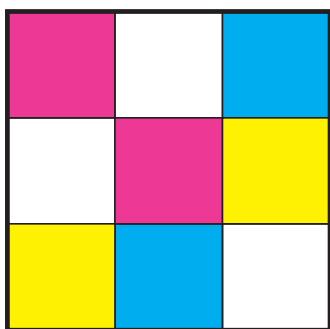


1. 2. 3.



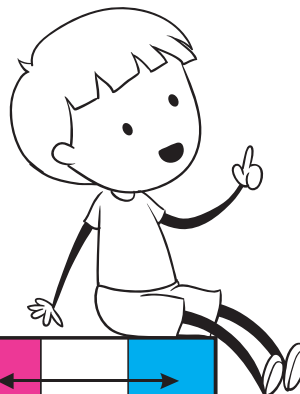
1. 2. 3.

Riješimo ovaj zadatak gledajući retke.



13

Promatrajmo retke.

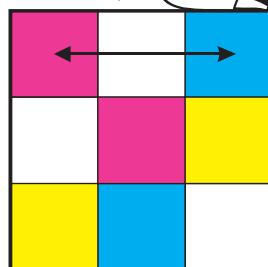


Vidimo da su u prvom retku roza i plava boja, te zaključujemo da nedostaje žuta.

1.

2.

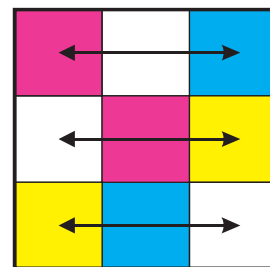
3.



1.

2.

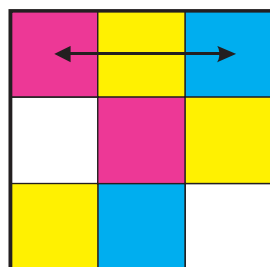
3.



1.

2.

3.

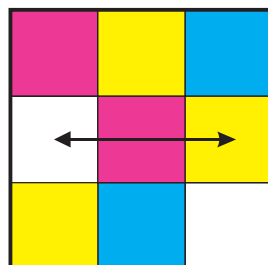


Promotrimo sada 2. redak.
U drugom su retku roza i
žuta boja, te zaključujemo da
nedostaje plava.

1.

2.

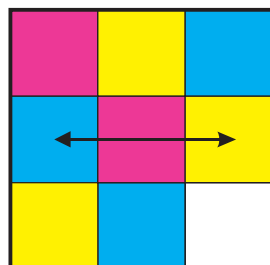
3.



1.

2.

3.

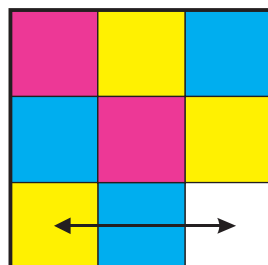


I na kraju nam je ostao 3. redak u
kojem su žuta i plava boja, te
zaključujemo da nedostaje roza.

1.

2.

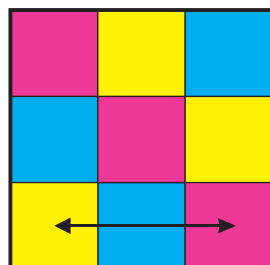
3.



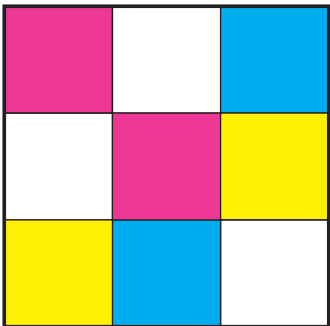
1.

2.

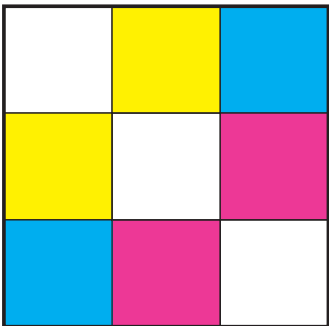
3.



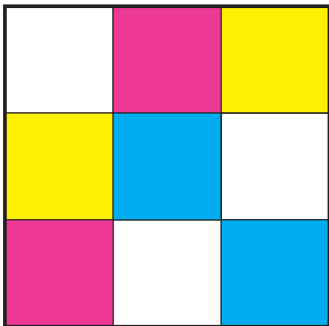
U ovim zadatcima u svakom retku nedostaje jedna boja. Koristeći se bojama koje se već nalaze u zadatku, riješi zadatke tako da se boja ne ponavlja u nekom retku ili stupcu.



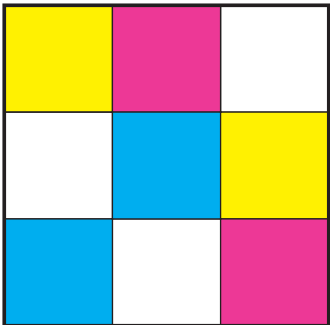
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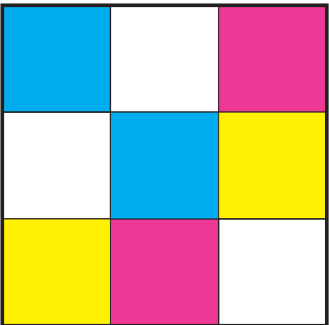
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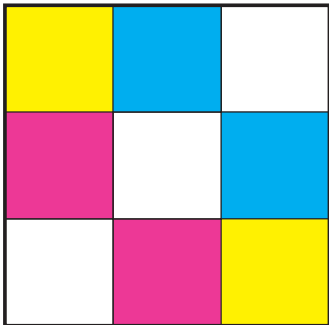
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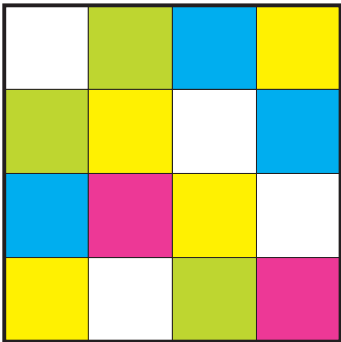
16



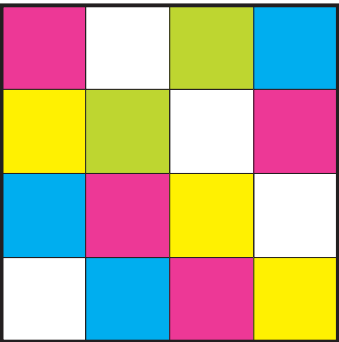
17



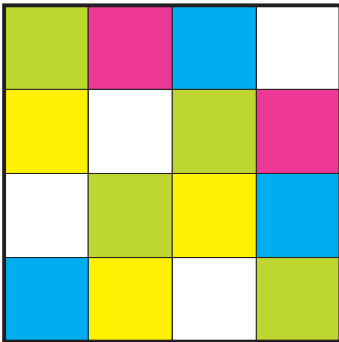
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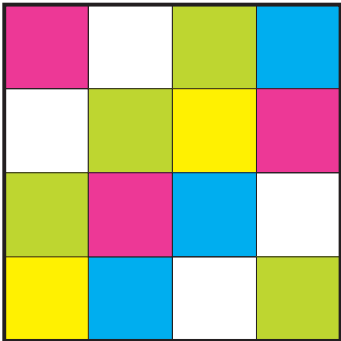
19



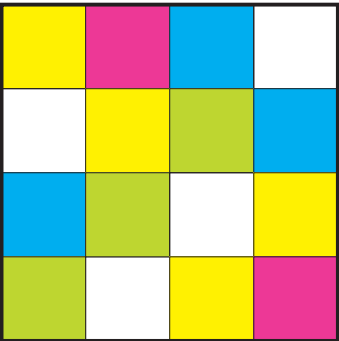
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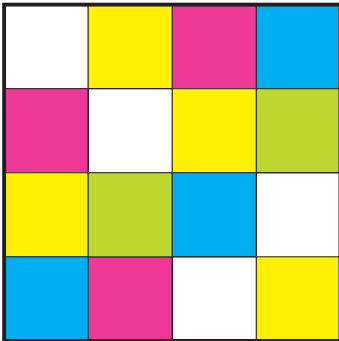
21



22

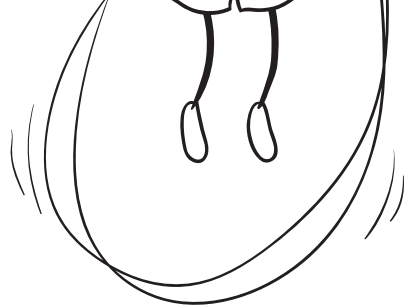


23

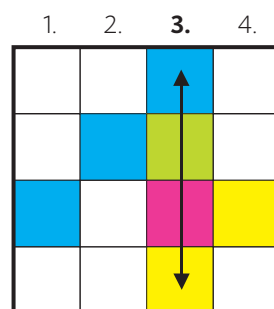
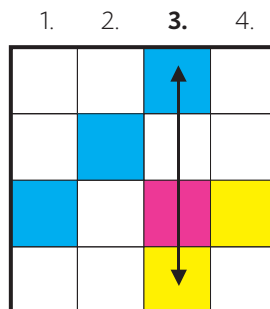
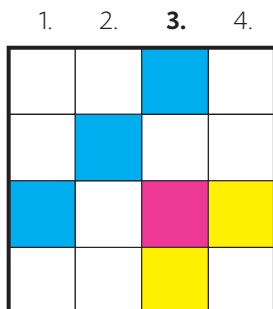


24

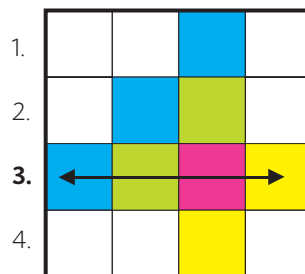
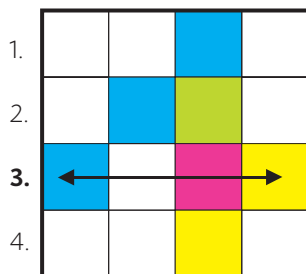
Sada kad smo naučili pravila, zajedno ćemo riješiti 37. zadatak koristeći se zadanim bojama.



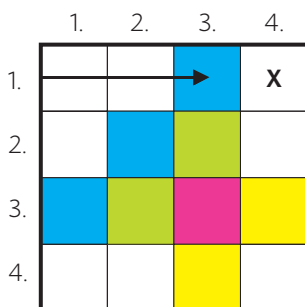
Zadatak krećemo rješavati od 3. stupca. Vidimo da su u 3. stupcu tri boje i nedostaje samo jedna boja, a to je zelena.



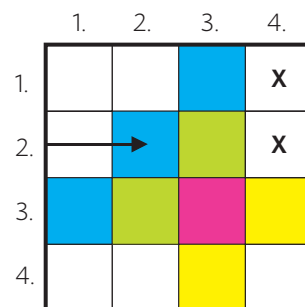
Sada promatramo 3. redak. Vidimo da su u 3. retku tri boje i nedostaje samo jedna boja, a to je isto zelena.



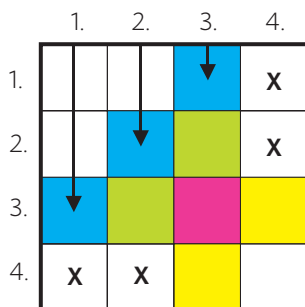
U sljedećem koraku promatramo plavu boju. Plava je boja u 1. retku na 3. polju što znači da ne može biti na prvom polju u 4. stupcu.



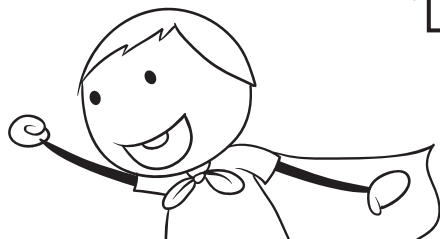
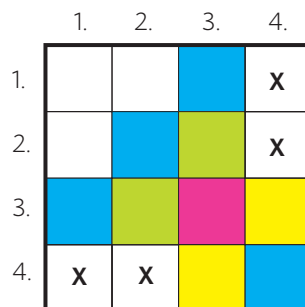
Isto tako plava je u 2. retku na 2. polju i ne može biti na drugom polju u 4. stupcu.



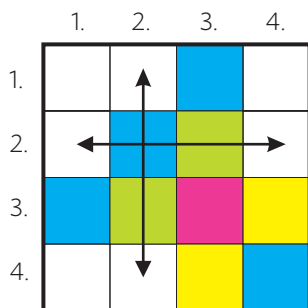
Na isti način možemo promatrati i stupce.



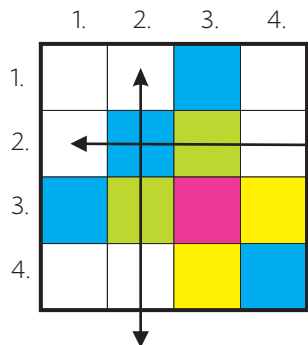
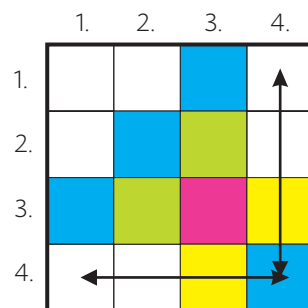
Vidimo da plava boja mora biti na četvrtom polju u četvrtom retku/stupcu.



Promotrimo gdje nedostaju dvije boje.

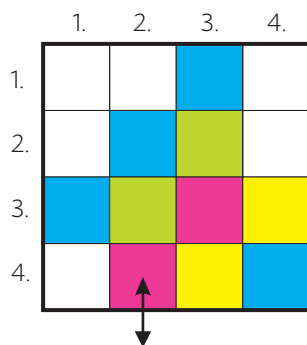


Vidimo da je to 2. stupac i redak te 4. stupac i redak.

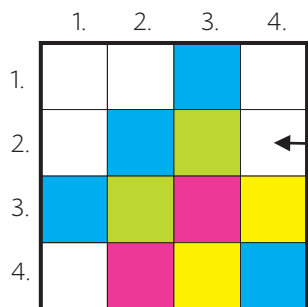
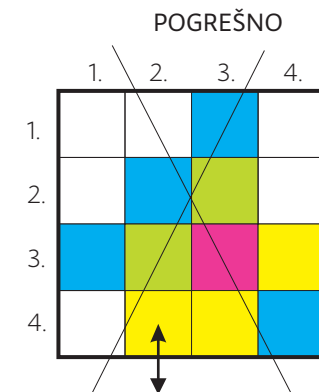


U ovom retku nedostaju roza i žuta boja.

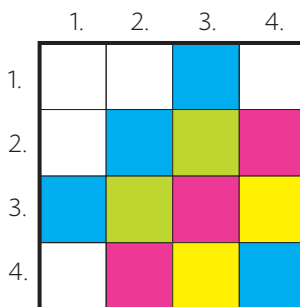
U ovom stupcu nedostaju roza i žuta boja.



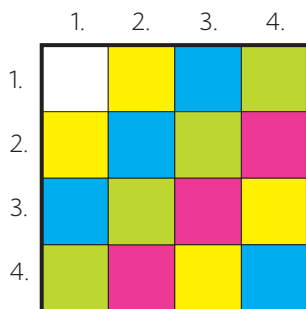
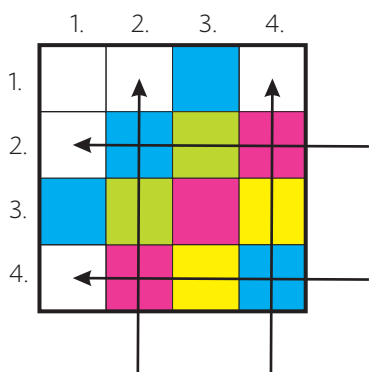
S obzirom na to da u ovom stupcu nedostaju roza i žuta boja, na ovom polju treba biti roza boja. Ako bi stavili žutu, tada bismo u zadnjem retku imali dvije žute, što nije ispravno.



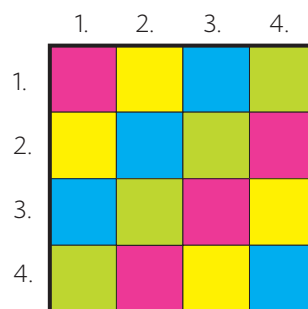
S istim razmišljanjem riješimo drugi redak.



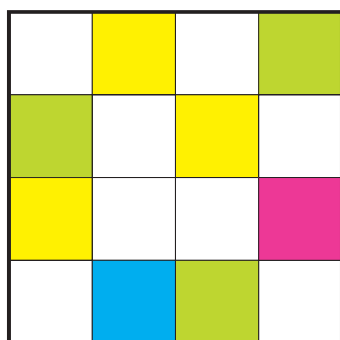
U sljedećem koraku pogledamo u kojem retku ili stupcu nedostaje samo jedna boja i upišemo je.



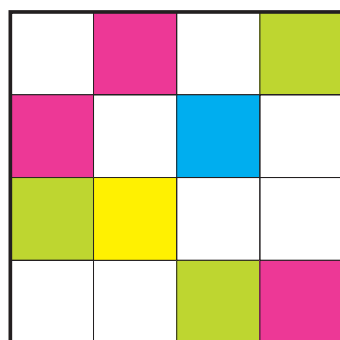
I zadnja boja koja nedostaje.



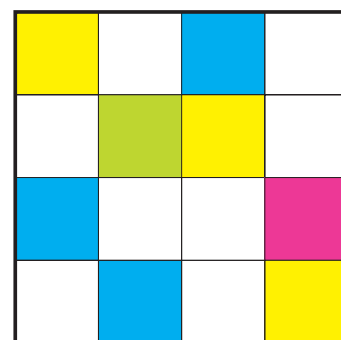
Koristeći se ovim bojama, riješi sljedeće zadatke.



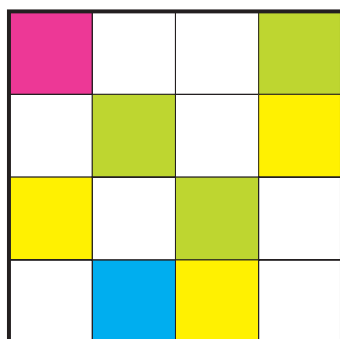
25



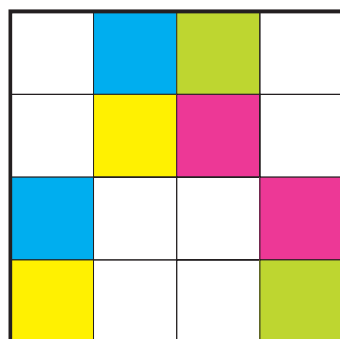
26



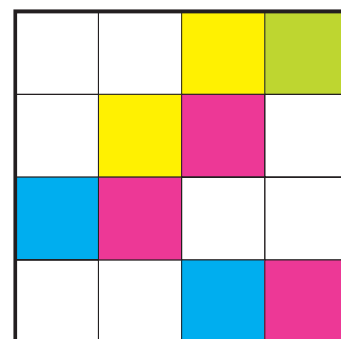
27



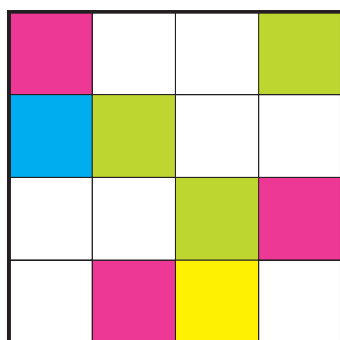
28



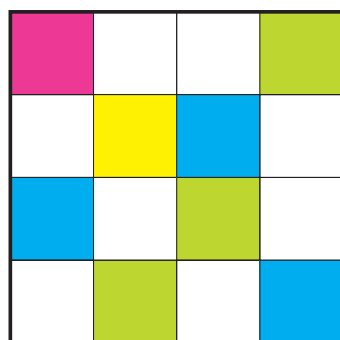
29



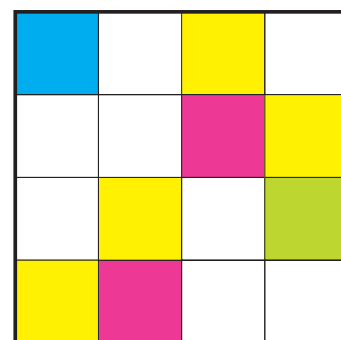
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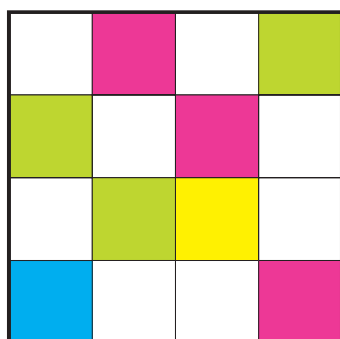
31



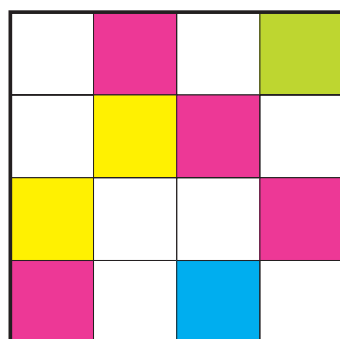
32



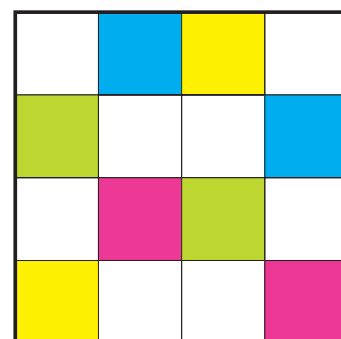
33



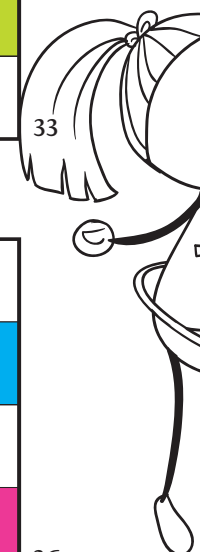
34

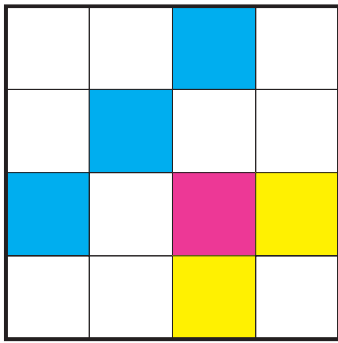


35

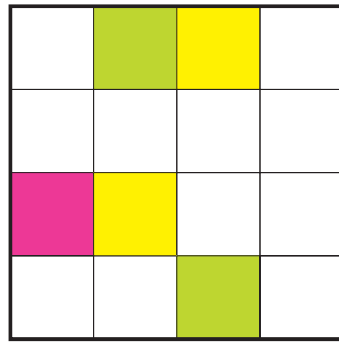


36

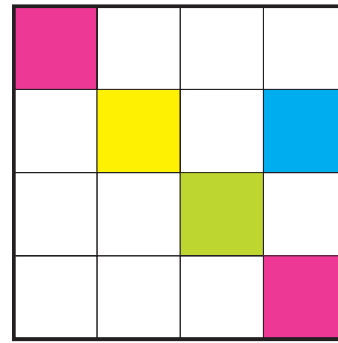




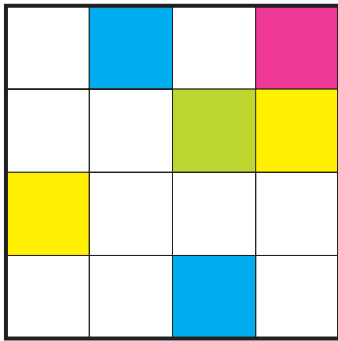
37



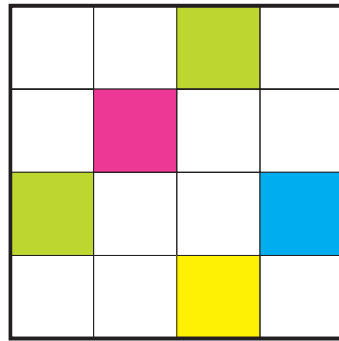
38



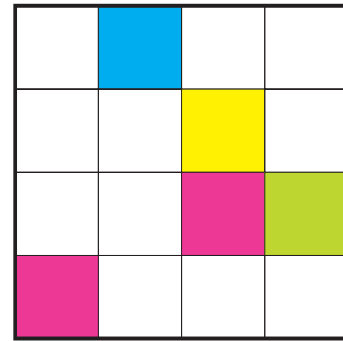
39



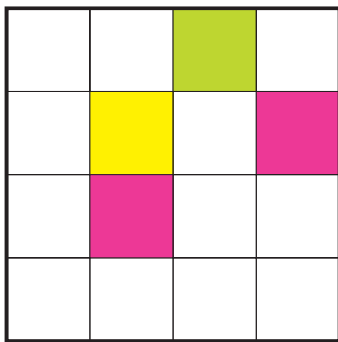
40



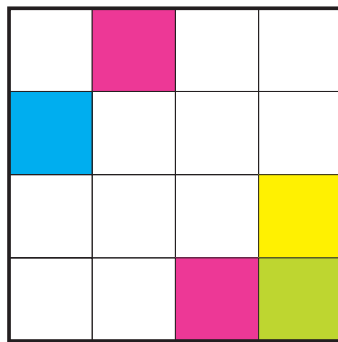
41



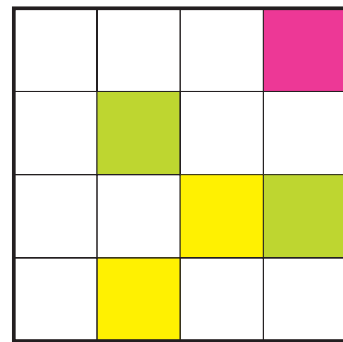
42



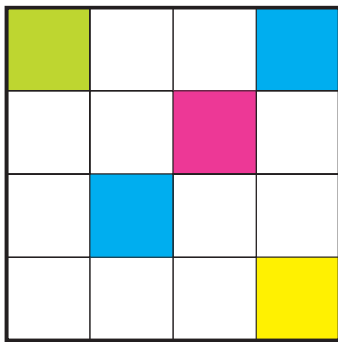
43



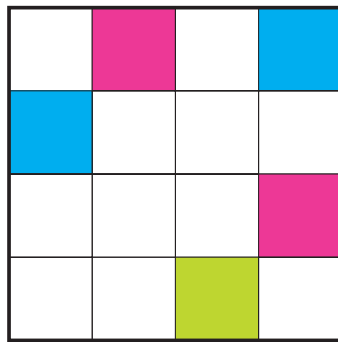
44



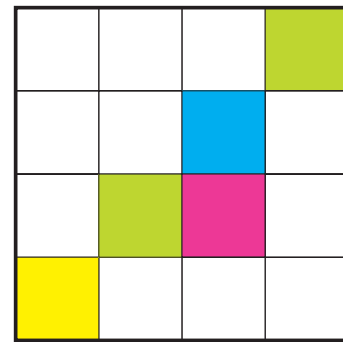
45



46

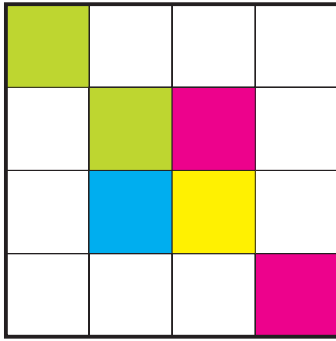


47

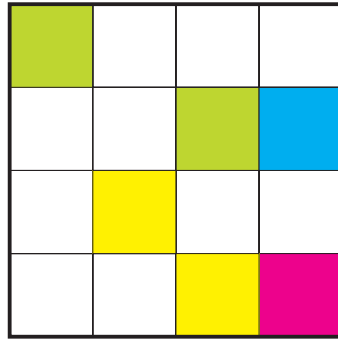


48

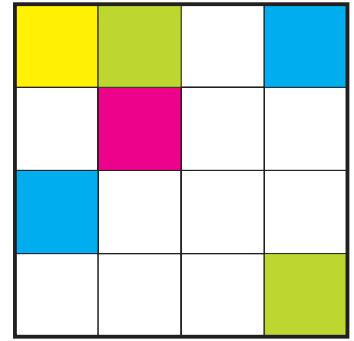




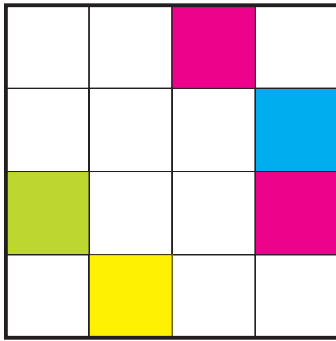
49



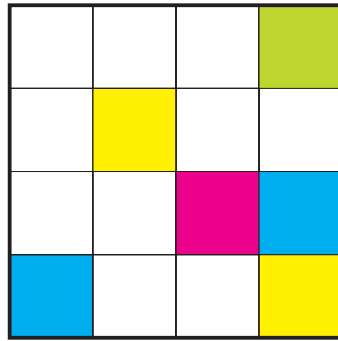
50



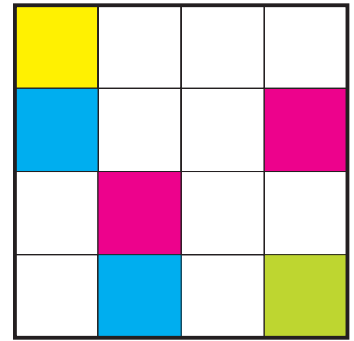
51



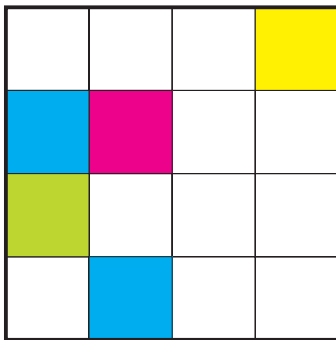
52



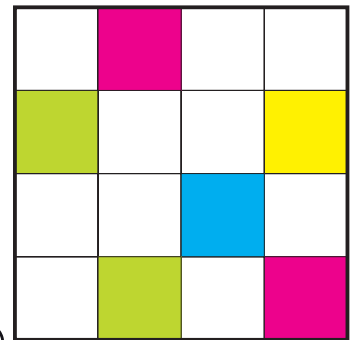
53



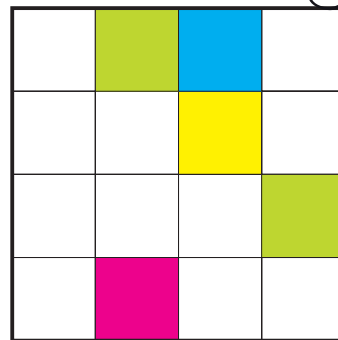
54



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