

# Stevens

# Binaire Puzzels

*Puzzelrooster*

**2**

*Moelijkheid*

**beginner**

*Afmetingen*

**9x9**

|   |   |   |   |   |  |   |   |   |   |
|---|---|---|---|---|--|---|---|---|---|
|   |   | 0 | 0 |   |  |   |   | 0 |   |
| 1 |   |   |   |   |  | 1 |   |   |   |
| 1 |   | 0 | 1 | 1 |  |   | 1 |   | 0 |
|   |   |   |   |   |  | 1 |   |   |   |
|   |   |   |   |   |  |   | 0 |   |   |
| 1 |   | 1 | 0 |   |  | 0 | 0 | 0 |   |
|   | 1 | 1 |   | 1 |  |   |   |   | 1 |
|   |   |   |   |   |  |   |   |   |   |
|   | 1 |   |   |   |  | 1 | 1 |   |   |
|   |   |   | 1 |   |  |   |   | 0 | 0 |
|   | 0 | 0 |   |   |  |   |   |   |   |
| 1 |   |   | 0 |   |  | 0 | 0 |   |   |
|   | 0 | 0 |   |   |  | 0 | 1 | 1 |   |
|   | 1 |   | 1 |   |  |   |   | 1 | 1 |

***de superpopulaire logische puzzel***

Hou je van onze puzzels? Doneer een zelfgekozen bedrag  
op [www.binairepuzzels.be/grid](http://www.binairepuzzels.be/grid).

Binaire puzzels zijn volledig opgelost wanneer:

- alle rijen en kolommen een gelijk aantal eentjes en nullen bevatten
- in rijen of kolommen met een oneven aantal vakjes staat er één eentje meer dan het aantal nullen
- geen twee rijen of twee kolommen exact hetzelfde zijn
- er niet meer dan twee opeenvolgende eentjes of nullen in een rij of kolom staan

Er is steeds slechts één oplossing voor een puzzel. De volgende tips kunnen je helpen:

|   |          |          |          |   |          |          |   |          |   |   |          |
|---|----------|----------|----------|---|----------|----------|---|----------|---|---|----------|
|   |          |          |          |   |          |          |   |          |   |   |          |
| 0 | 0        | <b>A</b> | <b>B</b> | 0 | 1        | 0        | 1 | 1        | 0 | 0 | 1        |
|   |          |          |          |   |          |          |   |          |   |   |          |
|   |          | <b>C</b> | 0        | 0 | <b>D</b> |          |   | <b>E</b> | 1 | 1 | <b>F</b> |
|   |          |          |          |   |          |          |   |          |   |   |          |
| 1 | <b>G</b> | 1        |          |   | 0        | <b>H</b> | 0 |          |   |   |          |
|   |          |          |          |   |          |          |   |          |   |   |          |
| 0 | 1        | 0        | <b>I</b> |   |          | <b>J</b> | 0 | 1        | 0 | 0 | 1        |
|   |          |          |          |   |          |          |   |          |   |   |          |
| 1 | 0        | 1        | 0        | 1 | 1        | 0        | 0 | 1        | 0 | 0 | 1        |
| 1 | 0        | 1        | 0        | 1 | <b>K</b> | <b>L</b> | 0 | 1        | 0 | 0 | 1        |
|   |          |          |          |   |          |          |   |          |   |   |          |

**Tip 1** Vervolledig rijen en kolommen

*Elke rij en elke kolom moet een gelijk aantal eentjes en nullen bevatten en daarom kan de rij aangevuld worden met twee eentjes: **A** = 1 en **B** = 1.*

**Tip 2** Vind duo's

*Er kunnen niet meer dan twee opeenvolgende eentjes of nullen voorkomen en daarom kan elk duo van eentjes of nullen aangevuld worden met het andere cijfer: **C** = 1 en **D** = 1, en **E** = 0 en **F** = 0.*

**Tip 3** Vermijd trio's

*Om trio's te vermijden moet je het andere cijfer tussen twee gelijke cijfers invullen: **G** = 0 en **H** = 1.*

**Tip 4** Elimineer onmogelijke combinaties

*In dit voorbeeld kan er slechts één nul voorkomen in de rij (I-J). Deze nul kan niet op I of J geplaatst worden omdat er anders een trio ontstaat in de overblijvende vakjes: **I** = 1 en **J** = 1.*

**Tip 5** Rij en kolommen mogen niet identiek zijn

*De rijen zijn identiek behalve wanneer **K** = 0 en **L** = 1.*

een beetje uitleg over de moeilijkheidsgraden

beginner: gebruik tips 1, 2 en 3

gemakkelijk: gebruik tips 1, 2, 3 en mogelijks 4

moeilijk: gebruik tips 1, 2, 3 en mogelijks 4 en 5

kampioen: gebruik tips 1, 2, 3, 4 en 5

Enkel voor persoonlijk gebruik, commercieel gebruik is expliciet verboden.

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|---|---|---|---|---|---|---|---|---|
|   |   | 1 |   |   | 0 |   |   |   |
|   | 0 |   |   |   | 0 | 0 |   | 1 |
|   |   | 1 |   |   |   |   |   |   |
|   |   | 1 |   | 1 |   |   |   |   |
|   |   |   | 0 |   |   | 1 | 1 |   |
|   |   |   |   |   |   |   |   |   |
| 1 |   |   |   |   |   |   |   | 0 |
|   | 1 |   |   | 0 |   |   |   | 1 |
|   | 0 | 0 |   |   | 1 | 1 |   |   |

1

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|   |   |   |   | 0 |   |   | 1 | 1 |
| 1 |   | 1 |   | 1 |   |   | 0 |   |
| 1 |   | 1 |   |   |   |   |   |   |
|   |   |   |   |   |   | 1 | 0 |   |
|   |   | 0 |   |   |   | 1 |   |   |
|   |   |   | 1 |   |   |   |   |   |
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|   | 0 |   |   |   | 1 |   | 0 | 1 |
|   |   | 1 |   |   |   |   |   | 1 |
|   |   | 1 | 1 |   |   |   |   |   |
| 0 |   |   |   |   |   | 1 | 1 |   |
|   | 1 | 1 |   | 0 |   |   |   |   |
|   |   |   | 0 |   |   | 0 |   |   |
|   |   |   |   | 0 |   | 0 |   |   |

3

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| 0 |   |   | 1 | 1 |   | 1 |   | 1 |
|   |   |   |   |   |   | 0 |   |   |
|   | 1 |   |   |   | 1 |   |   |   |
|   | 1 | 1 |   |   | 1 |   | 1 | 0 |
|   |   |   | 0 |   |   |   |   |   |
| 1 |   |   |   |   | 1 |   | 1 |   |
|   |   | 1 |   | 0 |   | 1 |   | 1 |
|   | 1 | 1 |   |   |   | 1 | 1 |   |
|   |   |   |   | 0 |   |   | 1 |   |

4

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| 0 | 1 |   |   | 1 |   |   | 0 |   |
|   |   |   |   |   | 0 |   |   |   |
| 0 |   |   |   | 1 |   | 1 |   |   |
|   |   |   |   | 1 |   |   |   | 0 |
|   | 1 | 0 |   |   | 1 |   |   | 0 |
|   |   |   |   | 1 |   |   |   |   |
|   |   |   | 0 |   |   | 1 |   | 1 |
| 1 |   | 0 | 0 |   |   |   |   |   |
| 0 |   |   |   |   | 1 |   |   | 1 |

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|   |   |   |   |   | 1 |   |   | 1 |
| 1 |   |   | 0 |   | 1 |   |   | 0 |
| 1 |   | 1 |   |   |   |   | 1 |   |
|   |   | 1 | 1 |   |   |   |   |   |
|   |   |   |   | 0 |   | 0 |   | 0 |
|   | 1 | 1 |   |   |   | 1 | 1 |   |
| 1 |   | 1 |   |   |   |   |   |   |
|   |   |   |   |   |   | 1 |   |   |
| 1 | 0 |   | 0 |   |   |   |   | 0 |

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|   |   |  |   |   |   |   |   |   |
|---|---|--|---|---|---|---|---|---|
|   | 0 |  |   |   |   |   | 1 |   |
| 0 | 0 |  | 1 |   |   |   | 1 | 1 |
|   |   |  |   |   | 1 |   |   | 1 |
|   | 1 |  | 1 |   |   | 0 |   |   |
|   |   |  | 1 | 1 |   |   |   | 0 |
|   | 1 |  |   | 1 |   |   | 1 |   |
| 1 | 1 |  |   |   |   |   | 1 |   |
|   |   |  | 0 | 1 |   |   |   |   |
| 0 | 1 |  |   |   |   | 1 | 0 |   |

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|---|---|---|---|---|---|---|---|---|
| 1 | 0 |   |   |   | 1 |   |   | 0 |
|   |   | 1 |   |   | 1 | 1 |   | 1 |
| 0 |   |   | 1 | 1 |   |   |   | 0 |
|   | 1 | 1 |   | 1 |   |   |   |   |
|   |   |   |   |   |   |   | 1 |   |
|   | 1 |   |   |   | 0 |   |   | 1 |
| 0 |   |   |   | 1 |   |   |   |   |
| 0 |   |   | 1 | 1 |   |   |   | 0 |
|   |   |   |   |   |   | 0 |   |   |

8

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   |   | 0 |   |   | 1 |   |   |   |
|   |   | 1 |   |   |   |   | 0 | 1 |
|   | 0 |   | 0 |   | 1 |   |   | 0 |
| 1 |   |   |   | 0 |   | 1 |   |   |
|   |   |   |   |   |   | 1 | 1 |   |
|   |   | 0 |   |   |   |   | 1 |   |
| 0 |   |   | 1 | 1 |   |   |   | 1 |
|   | 1 |   |   | 1 |   |   |   | 0 |
|   |   | 1 | 1 |   | 1 |   | 1 |   |

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|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 0 |   |   | 1 | 1 |   |   |   |   |
|   | 1 |   |   | 0 | 1 |   |   |   |
|   | 1 | 1 |   |   |   |   | 0 |   |
| 1 |   |   |   |   |   |   | 0 |   |
| 1 | 0 |   |   |   |   | 1 |   |   |
|   |   | 0 |   |   | 0 | 0 |   |   |
|   |   |   |   |   |   |   |   |   |
|   | 1 | 1 |   |   | 0 | 1 |   | 1 |
| 1 | 1 |   |   | 1 |   |   |   |   |

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|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   |   | 1 |   |   |   |   | 0 |   |
| 1 | 1 |   |   |   | 1 |   |   |   |
|   |   |   | 0 |   |   |   |   |   |
| 0 |   |   |   | 1 |   | 1 | 1 |   |
| 0 | 1 |   |   | 1 |   |   | 1 | 1 |
|   |   |   |   |   | 0 |   |   | 1 |
|   | 0 |   |   |   |   |   |   |   |
|   |   | 1 |   |   |   |   | 0 |   |
| 1 |   | 1 | 1 |   | 1 |   | 1 |   |

11

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 0 |   |   | 1 |   |   |   |   |
|   |   |   | 0 | 0 |   |   |   | 1 |
|   | 0 |   |   |   |   | 1 | 1 |   |
|   |   |   |   | 1 |   |   | 1 |   |
| 1 | 1 |   | 1 |   |   |   |   | 0 |
|   |   | 1 |   |   |   |   |   |   |
|   |   | 1 |   |   | 1 |   |   |   |
| 1 |   |   |   | 0 |   |   | 1 | 1 |
|   | 1 |   | 1 | 1 |   |   | 1 |   |

12

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 0 |   |   |   |   | 1 |   | 1 |
|   |   |   | 1 | 1 |   | 1 |   |   |
| 1 |   |   |   |   |   |   |   |   |
|   | 0 | 0 |   |   | 1 |   |   |   |
|   |   | 1 |   |   | 1 | 0 |   | 0 |
|   |   |   |   |   |   | 0 |   | 0 |
| 0 |   |   | 1 |   |   |   |   |   |
| 0 |   | 1 |   |   |   | 1 | 0 |   |
|   | 1 |   |   | 0 |   |   |   |   |

13

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   | 0 |   | 1 | 1 |   | 1 | 1 |   |
|   | 1 |   |   |   |   | 0 |   |   |
| 1 |   | 0 |   | 1 |   |   |   |   |
|   |   |   |   |   |   | 0 |   | 1 |
|   |   |   | 1 | 1 |   |   |   | 1 |
| 1 | 0 |   | 1 |   |   |   |   |   |
| 0 |   |   |   |   | 0 |   | 0 | 1 |
|   | 0 |   |   |   |   | 1 |   | 1 |
|   |   |   |   | 1 | 1 |   |   |   |

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|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 |   |   |   | 1 |   |   |   |   |
|   | 1 | 1 |   |   | 1 |   |   | 1 |
| 1 |   |   |   |   | 1 | 0 |   |   |
|   |   |   | 1 |   |   | 0 |   | 1 |
| 1 | 0 |   | 1 |   | 1 |   |   |   |
|   |   | 1 |   |   | 1 |   |   | 1 |
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| 1 |   | 0 |   |   |   | 1 |   | 0 |
|   | 1 |   |   |   | 0 |   | 0 | 1 |

15

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   | 1 |   |   |   | 1 |   |   | 0 |
| 1 |   |   | 0 |   |   | 1 | 1 |   |
|   |   |   | 0 |   |   | 1 |   |   |
| 1 |   |   |   |   | 0 |   |   |   |
|   |   |   |   | 1 |   | 0 |   |   |
| 1 | 1 |   |   |   |   |   |   | 1 |
|   |   |   |   |   |   |   |   | 1 |
| 1 |   | 1 | 1 |   |   | 1 |   |   |
|   |   |   |   | 1 |   | 1 |   | 1 |

16

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   | 1 |   |   |   | 0 |   | 1 | 1 |
| 1 | 1 |   | 1 |   |   | 0 |   | 0 |
|   |   |   |   |   | 1 |   |   |   |
|   |   | 1 |   |   |   | 1 |   |   |
|   |   | 1 |   |   |   |   | 0 |   |
| 1 | 1 |   |   |   | 0 |   |   | 1 |
| 0 | 1 |   |   | 1 |   |   |   |   |
|   |   |   |   |   |   | 1 | 1 |   |
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|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
|   | 0 |   | 1 | 1 |   | 1 | 1 |   |
|   |   |   |   |   | 0 |   |   |   |
|   | 1 |   |   |   |   |   |   |   |
| 1 | 1 |   |   | 0 | 0 |   |   | 1 |
|   |   |   |   |   |   | 1 | 1 |   |
| 1 |   |   | 0 |   | 1 |   |   |   |
|   |   | 1 |   | 1 |   |   |   | 1 |
|   |   | 1 |   |   |   |   | 1 |   |
| 0 |   |   | 0 |   | 1 |   |   |   |

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|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 0 |   |   |   | 1 |   |   | 1 |   |
| 1 |   |   |   | 1 |   | 0 | 0 |   |
|   | 1 |   |   |   |   |   |   |   |
|   |   | 0 | 0 |   |   | 1 | 1 |   |
|   |   |   |   |   | 1 | 1 |   |   |
| 0 |   |   |   | 0 |   |   |   | 1 |
|   | 1 |   | 1 |   |   |   | 0 | 0 |
|   | 1 | 1 |   | 1 |   |   |   |   |
| 1 |   | 1 |   |   | 0 |   |   | 1 |

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|---|---|---|---|---|---|---|---|---|
|   | 1 |   | 1 | 1 |   | 1 |   | 0 |
|   |   | 1 |   |   |   |   | 0 |   |
| 1 | 0 |   | 1 |   | 1 |   |   |   |
| 1 |   |   |   |   | 1 |   |   |   |
|   |   | 1 |   |   |   |   |   | 1 |
| 1 |   |   | 0 |   |   | 1 |   | 1 |
|   | 0 |   |   |   |   |   |   |   |
|   |   |   | 1 |   | 1 | 0 |   |   |
| 1 |   |   |   | 1 | 1 |   |   |   |

20

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |

1

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|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |

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| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |

3

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| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |

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| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
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| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |

5

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| 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |

6

|   |   |   |   |   |   |   |   |   |
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| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |

7

|   |   |   |   |   |   |   |   |   |
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| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |

8

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |

9

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |

10

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |

11

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

12

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |

13

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |

14

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |

15

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |

16

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |

17

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |

18

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |

19

|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |

20