數獨規則

|  |
| --- |
| 【數獨規則】在空格中填入數字，使得每個直行、每個直列、每個九宮格內的數字都不重複。 |

例如：

(1) (2)

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 2 | 3 | 4 |
| 3 | 4 | 1 | 2 |
| 2 | 1 | 4 | 3 |
| 4 | 3 | 2 | 1 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **9** | **7** | **8** | **4** | **2** | **6** | **5** | **1** | **3** |
| **1** | **3** | **5** | **9** | **7** | **8** | **6** | **4** | **2** |
| **6** | **2** | **4** | **5** | **1** | **3** | **8** | **7** | **9** |
| **2** | **1** | **9** | **7** | **8** | **5** | **3** | **6** | **4** |
| **8** | **6** | **3** | **1** | **4** | **2** | **9** | **5** | **7** |
| **5** | **4** | **7** | **6** | **3** | **9** | **2** | **8** | **1** |
| **3** | **5** | **1** | **2** | **6** | **7** | **4** | **9** | **8** |
| **7** | **8** | **6** | **3** | **9** | **4** | **1** | **2** | **5** |
| **4** | **9** | **2** | **8** | **5** | **1** | **7** | **3** | **6** |

Q1：試著做出4階()的數獨（空格內填入1～4）

|  |  |  |  |
| --- | --- | --- | --- |
| 1 |  | 2 |  |
|  |  |  | 1 |
|  | 4 | 1 |  |
| 2 | 1 |  | 3 |

|  |  |  |  |
| --- | --- | --- | --- |
| 1 |  | 2 |  |
|  | 3 |  | 4 |
| 4 |  | 3 |  |
|  | 2 |  | 1 |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | 4 |
| 2 |  |  |  |
|  |  | 3 |  |
|  | 1 |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 3 |  |  |
|  |  |  | 2 |
| 4 |  |  |  |
|  |  | 1 |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 2 |  |  |
|  |  |  | 2 |
| 1 |  |  |  |
|  |  | 3 |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1 |  |  |
|  |  | 1 |  |
|  |  |  | 3 |
| 2 |  |  |  |

Q2：試著做出6階()的數獨（空格內填入1～6）

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  | 4 | 1 |  |  |  |
| 4 |  |  |  |  | 5 |
|  | 5 |  | 6 | 2 |  |
| 5 |  |  |  |  |  |
| 6 |  |  |  | 3 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2 |  |  |  | 3 |  |
|  |  | 5 | 2 |  |  |
|  |  | 1 | 4 |  |  |
|  |  | 2 | 3 |  |  |
|  |  | 4 | 6 |  |  |
|  | 2 |  |  |  | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 5 |  |  |  | 6 |  |
| 6 |  |  |  | 4 |  |
| 1 |  |  |  |  |  |
|  |  |  |  |  | 3 |
|  | 1 |  |  |  | 4 |
|  | 2 |  |  |  | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 3 |  | 1 | 2 |  |  |
|  |  |  |  |  |  |
|  | 5 |  |  | 3 |  |
| 2 |  |  | 6 |  |  |
|  | 4 |  | 3 |  |  |
|  |  |  |  |  |  |

Q3：試著做出9階()的數獨（空格內填入1～9）

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | 5 |  |  |
| 4 |  |  |  | 1 | 8 |  | 9 |  |
|  | 1 | 8 |  |  | 2 |  |  | 3 |
|  |  | 9 | 2 |  | 6 | 3 | 5 |  |
|  | 4 |  |  |  |  |  | 7 |  |
|  | 5 | 1 | 8 |  | 9 | 2 |  |  |
| 1 |  |  | 9 |  |  | 6 | 3 |  |
|  | 2 |  | 6 | 3 |  |  |  | 7 |
|  |  | 5 |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 |  | 8 |  |  |  |  |  |  |
|  |  |  |  | 7 |  |  |  |  |
|  |  |  | 5 | 1 |  |  |  |  |
|  | 1 |  |  |  |  |  |  |  |
|  |  |  |  |  | 2 | 9 |  |  |
|  |  |  | 6 |  | 9 | 2 | 8 |  |
|  | 5 | 1 |  |  |  |  |  |  |
|  |  |  |  |  | 4 |  | 2 |  |
|  |  |  |  |  |  |  | 3 |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 |  |  |  | 6 |  |  |  | 2 |
|  |  |  | 9 |  | 1 |  |  |  |
| 8 |  | 5 |  |  |  | 6 |  | 7 |
|  | 4 |  |  | 5 |  |  | 6 |  |
| 5 |  |  | 3 |  | 2 |  |  | 8 |
|  | 2 |  |  | 8 |  |  | 7 |  |
| 9 |  | 3 |  |  |  | 5 |  | 1 |
|  |  |  | 8 |  | 3 |  |  |  |
| 6 |  |  |  | 4 |  |  |  | 9 |

（數學思考）

1. 數獨如何製作出來？  
   （怎麼知道有解？怎麼確定只有一解？）
2. 數獨最少需要填入幾個數字？
3. 有沒有其他趣味的規則？