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？