# Decodoku Puzzle Book

## Solve Puzzles!
## Help Science!

UNI BASEL

QSIT Quantum Science and Technology

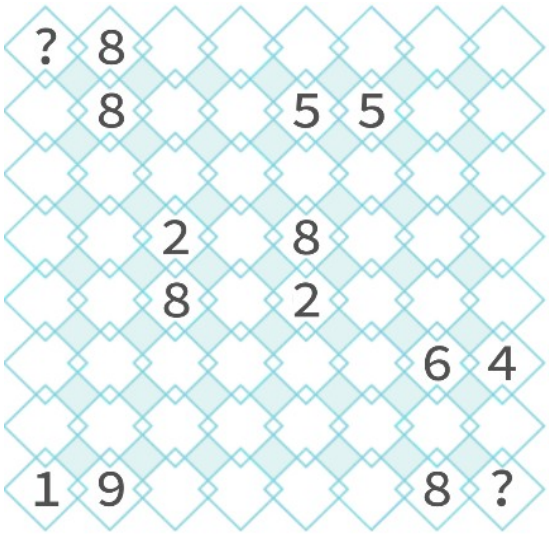
National Centre of Competence in Research

**To build a quantum computer, we need to solve puzzles. They aren't weird quantum puzzles. They are just like the ones you solve all the time. So help us out!**

Each puzzle has a grid of numbers.

They come in groups that add up to a multiple of 10.

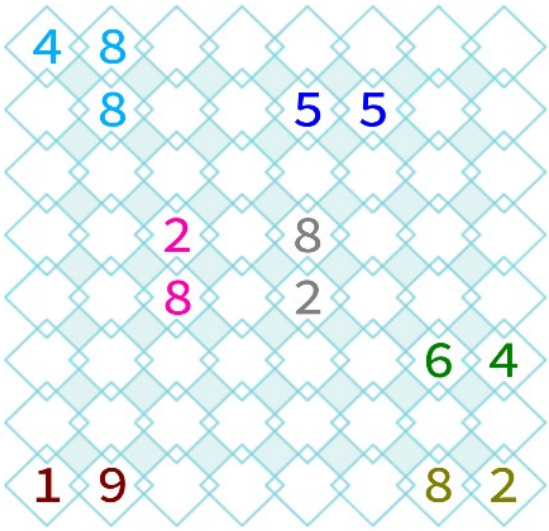
There are two ? squares. You just need to work out what's in them (if anything).



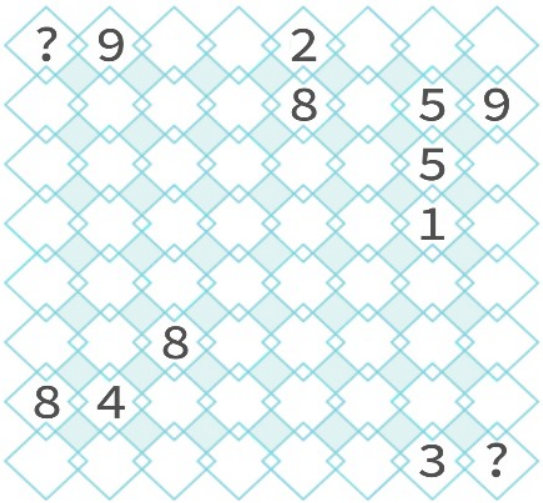

Here's the full solution for the example above.

The bottom right has an 8 in need of a 2. But nothing is nearby. So the bottom left ? square must hold that that 2.

The top left has two 8's. They need a nearby 4 to give us 20. So the top left ? is a 4.

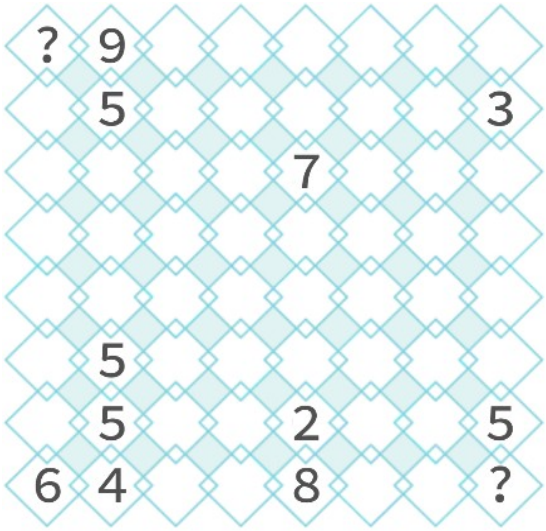


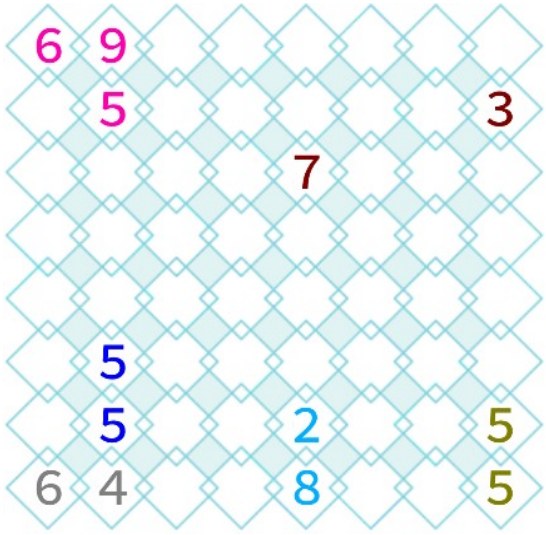

This example had simple groups. Mostly just pairs that add up to 10. But the groups can get more messy, as in the example below



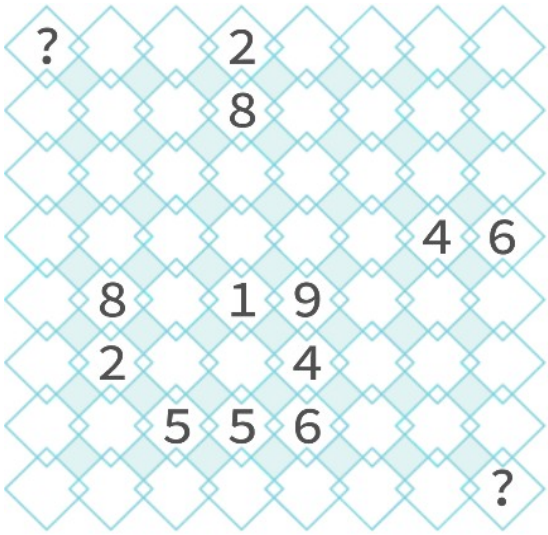
The numbers don't need to touch to be in the same group.
But the further away they are from each other, the less likely they are to be in the same group.

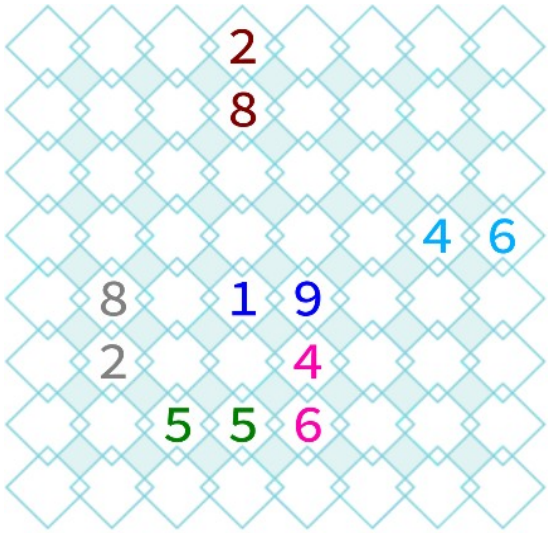
For example, look at the 7 and the 3 below. They are quite far from each other, but neither has any other friends nearby.
So they belong together.




A final word of advice. It is possible that either ? square can be empty. They can even both be empty!



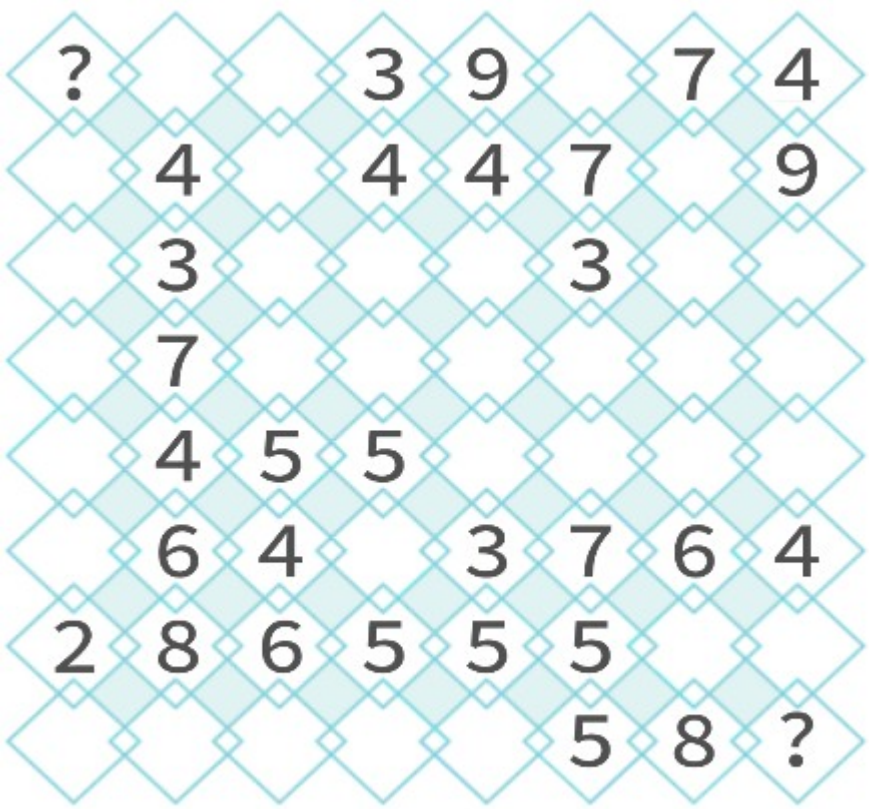




Now we have over 100 puzzles for you to try. Once you've finished, you'll know more about quantum error correction than we do! So come and tell us scientsists how to do our job at

**www.decodoku.com/puzzles**

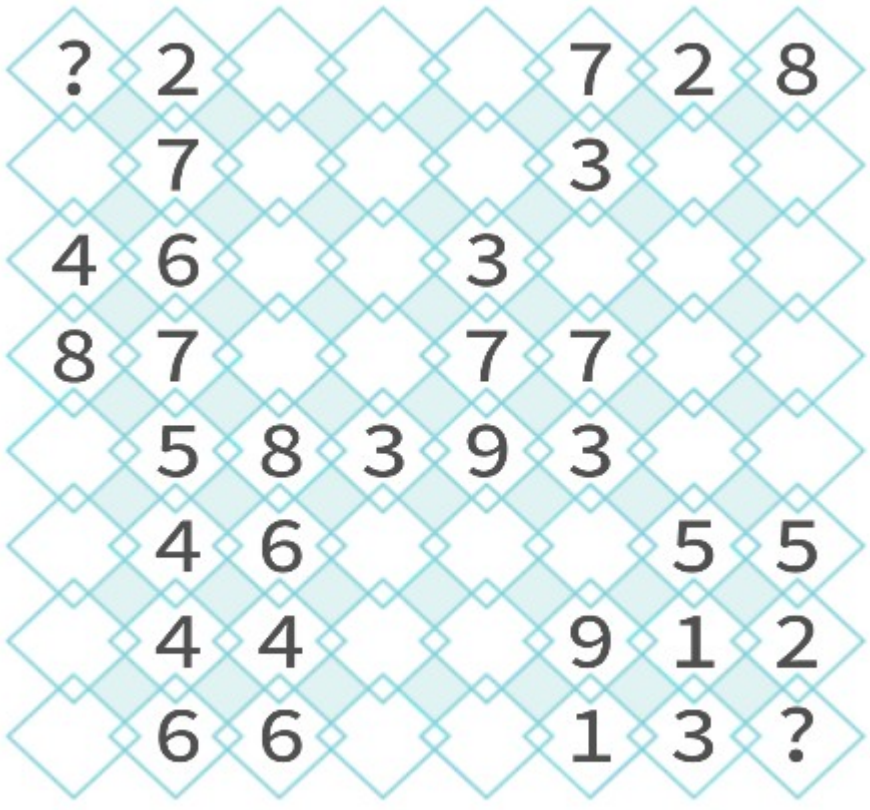
Do it before the end of 2016 and you could even win a prize!

We'll start with 10 easy puzzles, and then move on to some harder ones. The solution for each puzzle is written underneath.




top left = six

bottom right = two




top left = one

bottom right = four

top left = six  bottom right = five




top left = zero  bottom right = two

top left = two  bottom right = three




top left = seven  bottom right = one

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

top left = nine

bottom right = one

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

top left = six

bottom right = five

top left = five

bottom right = seven




top left = two

bottom right = nine

top left = two  bottom right = eight




top left = four  bottom right = one

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

top left = three  bottom right = three


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

top left = three  bottom right = three

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

top left = three  bottom right = three

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

top left = six  bottom right = six

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

top left = eight  bottom right = zero

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

top left = five  bottom right = eight

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

top left = three  bottom right = one

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

top left = two  bottom right = six

top left = two

bottom right = three




top left = two

bottom right = one

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

top left = five  bottom right = nine

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

top left = three  bottom right = three

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

top left = four  bottom right = five

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

top left = eight  bottom right = four

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

top left = three  bottom right = three

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

top left = eight  bottom right = two

top left = two

bottom right = seven




top left = seven

bottom right = two

top left = six  bottom right = four

top left = two  bottom right = six

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

top left = one

bottom right = one

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

top left = four

bottom right = two

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

top left = nine  bottom right = zero

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

top left = zero  bottom right = eight

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

top left = three  bottom right = six

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

top left = three  bottom right = two

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

top left = two  bottom right = seven

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

top left = six  bottom right = nine

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

top left = three  bottom right = one

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

top left = one  bottom right = seven

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

top left = zero  bottom right = eight

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

top left = eight  bottom right = eight

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

top left = nine  bottom right = eight

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

top left = two  bottom right = one

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

top left = zero  bottom right = five

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

top left = eight  bottom right = zero

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

top left = six

bottom right = seven

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

top left = two

bottom right = eight

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

top left = one  bottom right = five

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

top left = eight  bottom right = zero

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

top left = six  bottom right = seven

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

top left = six  bottom right = seven

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

top left = four  bottom right = eight

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

top left = six  bottom right = seven

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

top left = two

bottom right = eight

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

top left = one

bottom right = five

top left = eight  bottom right = zero




top left = six  bottom right = seven

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

top left = six

bottom right = seven

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

top left = four

bottom right = eight

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

top left = five  bottom right = one

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

top left = four  bottom right = eight

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

top left = three  bottom right = four

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

top left = eight  bottom right = four

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

top left = one  bottom right = three

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

top left = five  bottom right = six

top left = seven  bottom right = one




top left = seven  bottom right = five

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

top left = one  bottom right = two

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

top left = eight  bottom right = three

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

top left = seven  bottom right = three

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

top left = five  bottom right = nine

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

top left = three  bottom right = six

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

top left = six  bottom right = five

top left = one

bottom right = five




top left = one

bottom right = five

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

top left = one

bottom right = four

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

top left = six

bottom right = four

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

top left = three  bottom right = nine

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

top left = one  bottom right = seven

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

top left = eight  bottom right = one

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

top left = five  bottom right = eight

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

top left = eight  bottom right = two

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

top left = two  bottom right = one

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

top left = zero  bottom right = nine

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

top left = four  bottom right = two

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

top left = two  bottom right = one

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

top left = five  bottom right = five

top left = five  bottom right = eight




top left = four  bottom right = six

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

top left = seven  bottom right = one

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

top left = seven  bottom right = seven

top left = three  bottom right = eight




top left = five  bottom right = nine

top left = six  bottom right = four




top left = three  bottom right = two

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

top left = three  bottom right = two

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

top left = eight  bottom right = one

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

top left = nine  bottom right = four

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

top left = six  bottom right = zero

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

top left = seven  bottom right = seven

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

top left = seven  bottom right = eight

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

top left = eight  bottom right = eight

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

top left = two  bottom right = nine