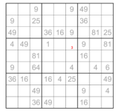
Step by step solution

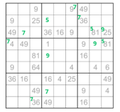


Pitcaud said a Kingpin puzzle - over the rows with grey numbers - with a sign between 1 and 9 as that was my course, and confirmed it to a degree (cannot read Japanese).

Don't give, further down below, is equal to the product of all of the orthogonally adjacent cells in the surrounding 3x3 box.

Therefore 6 in the cell in the row 1 of the column 2 is either over 9 orthogonally adjacent cells in the surrounding 3x3 box, or 6 times 1.

STEP 1



We can fill in the 7 in box 1, 3 and 8.
And also the 9's in box 1, 3 and 8
Fill in the 5 in box 2, because at least one 5 needs to be in a different 3x3 box, and this is the only option due the 25 factor uniquely in box 2, which result in filling in the 5 in box 1 and 2

STEP 2

Fill in the bottom that are unique.
The 4 in box 9 can only be made with a 1 and 4, since 24 is not possible, so then there would be 2 2's in grid 9
Same story with the 9 in row 2, col 5 in box 1

The 7 in box 5 can be deduced by standard sudoku rules

STEP 3

We can fill in the 1 in box 2, every choice results in a 1 in box 2

STEP 4

We can put 2's for the 9 in box 1. Since this one needs to be created from two 2's, in row 3 needs to be in box2, which leaves only one option for the 3 in box 1. Then we can place a 3 in row 1 box 1 because there is already a 3 in row 3 box 1, and an one 1 in box2. A correct for made by two 3's, as those are used already. So it needs to be with a 1 and a 9. Since there is already a 9 in row 1 box 1, we can place a 1 in row 1 box 1 and placed. We can see red 4 lines also. We perform regular sudoku rules to delete the potential 1 and 9's in row 3. We conclude that there should be a 7 in row 2, col 2, box 1.

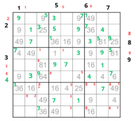
STEP 5

We can put a 6 in the center of box 5, since the 36 should be satisfied and 9*4=36.
Also, the 4 in box 8 can be placed, and 1. Since two 2's is impossible. This makes it that the 9 in box 9 NEEDS to be made from two 3's. Since there is a 3 in col 7, there needs to be a 3 in row 8, box 9.

STEP 6

Because of the 6 in the middle of box 5, we can place the 2 and 3 that make up the 6 in box 6.
Also, for a little already, we can put the 9 in box 6, because of row 9 in box 9 by regular sudoku rules.
Then, the 2 in box 6 must be made from two 1's. Because in the first column, there cannot be a 1 due to the 6. It position.
We can place the two 2's that make up this 9.
We put potential 9's in box 8 by regular sudoku rules.

STEP 7



The 15 in box 7 needs to be made up by 6*5, since 9*6 is not possible
The 9 in box 9 cannot be made with two 3's, as a 3 in col 6 is not possible, and that is the only possibility for this since 3 is the different box. So it needs to be made up from a 9*1. A 1 in box 9 is not possible because of sudoku rules, so this one needs to be a six, box 9

STEP 8

By sudoku rules, we can place a 5 in box 6 already for a while actually whoops), we put the potential 3's in box 9.
Note that the 16 in box 9 needs to be made from 8*2, since we cannot put a 4 adjacent to the 16 in box 9, per these sprouts in the 4 adjacent rule. Since there is a 2 in row 2, we can place a 2 in that cell.
chain starts on these squares. Note just possible options.

By sudoku rules, we know that a 5 needs to be in box 7 & 8 in the middle row in box 7. A correct run in the middle square, as it is occupied by either an 8 or 2.
In box 9, the 6 in the 36 must be made from the bottom of the square — in box 8, the 9 needs to be in the center, which allows us to place a 3 at the bottom of box 8 as well, and also the 3 in box 9

STEP 9

box 4, the 4 it cannot be made with 4*1. Suppose this is possible, then the 4 must be made from 2*2. But this is impossible, because the 2 can also not be placed anywhere, due to regular sudoku rules. — It needs to be made from 2*2, which we can fill in, due to regular sudoku rules.

This is great as we can use the 2 to fill in the 8 and 2 in box 7!

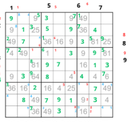
STEP 10

Just realized that we only have two options for the 4 in box 3, solid chain in blue (if it isn't clear, blue is always 2*2 box related, the red indicators are for "sprouts that can create the product").

I just realized that the 4 in box 3 only has two possible neighbours, so we can fill in both of these 8's. Consequently, fill in blue 8's in box 1, and also blue 4's in box 1

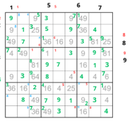
There's a create opportunity to restrict the product to create the 16's (hopefully)

STEP 11



Just realized that the 36 in box 2 cannot be made by a 9*4, because due to regular sudoku rules we cannot put a 9 adjacent to a 9 in row 1 box 2. Therefore, the 36 must be made from 6*6, a change by considering all 3-sprouts where the 6 can fit in.

STEP 12



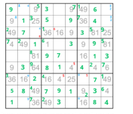
Consider column 4. By regular sudoku rules, we can put a 2 in box 8, bottom row, and thus a 4 in cell 5, box 8.

The new 2 box 8 has implications for the 2 in box 9, too. The new 4 has implications for the 1 and 4 in box 9.

STEP 13

By regular sudoku rules, we can put a 1 in box 7, and then in box 4, too, and then in box 5, (all the 1's and 7's are done)

STEP 14



By regular sudoku rules, we can put a 3 in box 7 (check the row 8), and then a 6 in the 4 in box 7. To satisfy sudoku rules, put a 8 in box 7 (check column 8), and we can put a 8 and a 5 in the bottom middle row.

By regular sudoku rules at cell 8, we cannot put a 2 in box 9 cell 8, so the 2 needs to be in box 8 cell 8. We put an 8 in box 9, cell 8.

STEP 15

I just see now that step 9 already, we can fill the 8 in box 5, whoops. The missing 6 in box 7 cannot be on row 1 - it would create a 2*2 box with 2*6.
This impacts box 3, fill in the rest of box 3, too.

Place blue 4's in box 2

Solve from here

Solution = 114687
(arrow)!
https://www.kakuro-online.com/?puzzle=sudoku-r-square-sudoku-x-solution!

Just did some straightforward steps from here, mostly rrs, but perhaps it could have been even faster with the product clues.