

Here is how I solved the problem.

Look at the first column -- it has a large number for an answer, so I started there and looked for all the possibilities that gave me 43:

1 x anything won't work

2 x anything won't work

3 x anything won't work

$$4 \times 9 + 7 = 43$$

$$5 \times 7 + 8 = 43$$

$$5 \times 8 + 3 = 43$$

$$6 \times 7 + 1 = 43$$

$$7 \times 6 + 1 = 43$$

$$7 \times 5 + 8 = 43$$

$$8 \times 5 + 3 = 43$$

$$9 \times 4 + 7 = 43$$

This tells me that 1, 2, and 3 cannot be in Row 1, col 1 and row 2, col 1.

In other words, those two blanks must be filled by 4, 5, 6, 7, 8, or 9.

Now I would look at one of the horizontal rows, and I chose the second row because it has division in it.

I already know that 1, 2, and 3 are eliminated from the first column. So start with 4:

$$4 / 2 + 1 = 3$$

5 divided by anything won't work.

$$6 / 3 + 1 = 3$$

7 divided by anything won't work

$$8 / 4 + 1 = 3$$

9 divided by anything won't work.

This tells me that row 2 col 1 must be either 4, 6, or 8 (so I can eliminate 5, 7, and 9).

This tells me that row 2 col 2 must be either 2, 3, or 4.

It tells me that row 2 col 3 must be 1, so we have found our first number.

So, I would look at the third column since we know the middle number is 1.

Here are all the possibilities:

$$2 + 1 + 7 = 10$$

$$3 + 1 + 6 = 10$$

$$4 + 1 + 5 = 10$$

$$5 + 1 + 4 = 20$$

$$6 + 1 + 3 = 10$$

$$7 + 1 + 2 = 10$$

So each of the remaining numbers in column 3 must be either 2, 3, 4, 5, 6, or 7.

So Now I would look at the top row.

The first number must be chosen from 4, 5, 6, 7, 8, and 9.

The third number must be chosen from 2, 3, 4, 5, 6, or 7.

4 + anything won't work because of order of operations. You must multiply before you add.

There are no two integers from 1 to 9 whose product is 29.

$$5 + 4 \times 7 = 33$$

$$5 + 7 \times 4 = 33$$

$$6 + 9 \times 3 = 33$$

7 + anything won't work

8 + anything won't work

$$9 + 4 \times 6 = 33$$

$$9 + 6 \times 4 = 33$$

$$9 + 8 \times 3 = 33$$

So, now we have narrowed the numbers down:

row 1 col 1 must be 5, 6, or 9.

row 1 col 2 must be 4, 5, 7, 8, or 9.

row 1 col 3 must be 3, 4, 6, or 7.

So, now I would look at the second column since it has division in it.

We know that

row 1 col 2 must be 4, 5, 7, 8, or 9.

row 2 col 2 must be either 2, 3, or 4.

$$4 / 2 - 3 = -1$$

5 / 2, 3, or 4 doesn't work

7 / 2, 3, or 4 doesn't work

$$8 / 2 - 5 = -1$$

$$8 / 4 - 3 = -1$$

$$9 / 3 - 4 = -1$$

So let's summarize what we know:

row 1 col 1: 5, 6, 9

row 1 col 2: 4, 8, 9

row 1 col 3: 3, 4, 6, 7

row 2 col 1: 4, 5, 6, 7, 8, 9

row 2 col 2: 2, 3, 4

row 2 col 3: 1

row 3 col 1: 1, 3, 7, 8

row 3 col 2: 3, 4, 5

row 3 col 3: 2, 3, 5, 6

Now look at the third row:

1 does not work

3 does not work

$$7 \times 5 - 6 = 29$$

$$8 \times 4 - 3 = 29$$

So, we can eliminate more numbers:

row 1 col 1: 9

row 1 col 2: 8

row 1 col 3: 3

row 2 col 1: 4, 5, 7, 9

row 2 col 2: 2, 3, 4

row 2 col 3: 1

row 3 col 1: 7, 8

row 3 col 2: 4, 5

row 3 col 3: 3, 6

And now we can complete the puzzle.