

Downright Handsome – Full Solution Guide

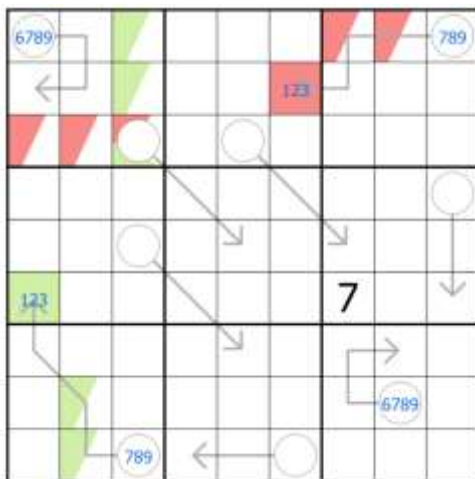
This is a full solution guide to my puzzle *Downright Handsome*, and so spoilers are ahead.

Rules

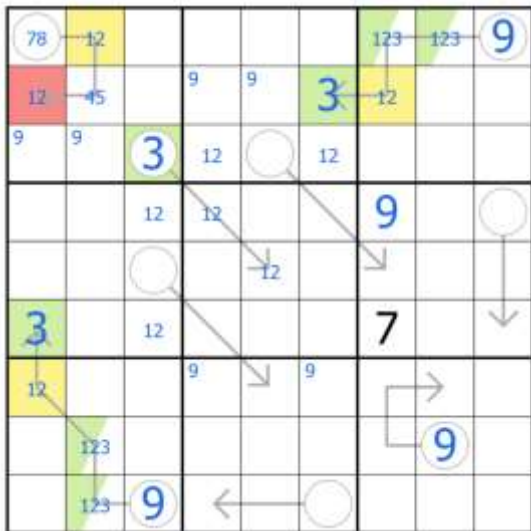
- Normal sudoku rules apply: Place the digits 1 to 9 once each in every row, column, and 3x3 box
- **Arrows:** Digits along an arrow sum to the digit in the connected circle

Solve Path

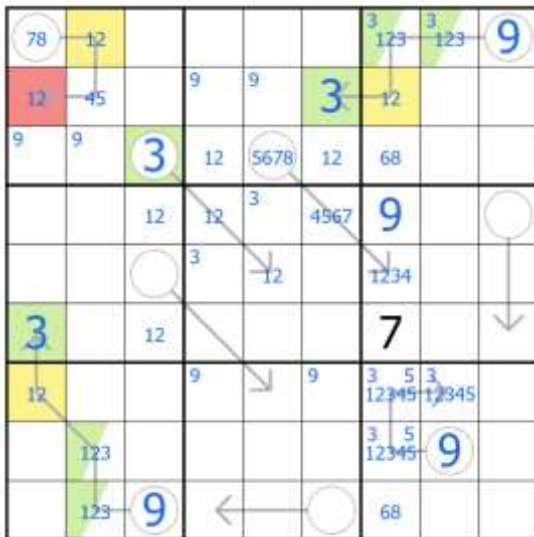
- A four cell arrow must have a repeated digit as 4 different digits sum to at least 10, hence we can roughly place R2C6 in box 1 and box 3, and similarly R6C1 in box 3 and box 7
- The repeated digit is no more than 123



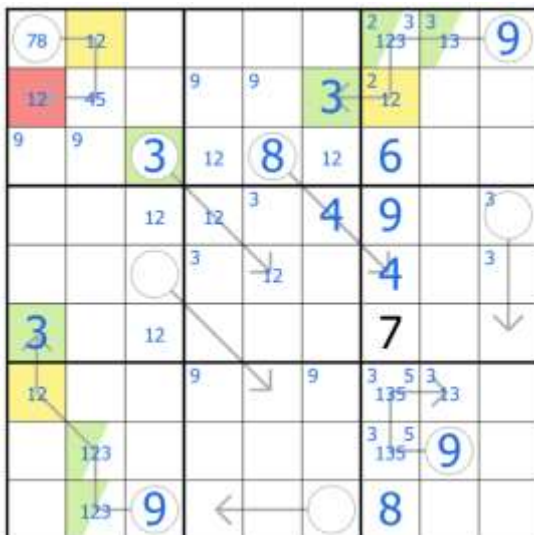
- The 3 cell arrow in box 1 must contain two digits from 123, so if red and green are different then the box 1 arrow is impossible to fill
- Hence red and green are the same, and in box 1 they are placed in R3C3
- As this is in an arrow circle, it must be a 3, placing 12 pairs in box 5, 9s in the circles in box 3 and 7
- Places 9 in box 9
- Remaining cells on the arrows in box 3 and 7 are from 123, and 12 pairs are placed in row 3 and column 3
- Arrow in box 1 can't be 9, and without containing a 3 it must be 124 or 125 summing to 7 or 8
- The 12 pairs in that sum can be roughly placed



- R4C6 is min 4, makes R3C5 from 5678 and R6C7 from 1234
- Yellow 12 is completely absent from the arrow in box 9, which means this is not 126, so it contains a 3 and is from 12345
- Gives a 12345 quint in C7



- The 5 of the 12345 quint in C7 is on the arrow in box 9, making this a 135 arrow
- Leaves 4 in R5C7, making this an 844 arrow
- 3 in column 9 is roughly placed



- 4 is placed in row 6, resolving the arrow in box 1
- 1 is roughly placed in box 6
- R6C4 is from 56, making R7C5 from 123



- Row 7 has a 123 triple, making R7C7 a 5
- Places 5 in column 3
- Box 6 arrow contains both 1 and 3. 1 and 3 summing to 4 is not possible by sudoku, leaves 1 and 2 summing to 3
- Places 2 in box 9

8	12					2	3	3	9
12	5		9	9	3	2	12	47	8
9 479	9 79	3	12	8	12	6	47	5	
5		12	12		4	9	568	3	
5		678	3	12		4	568	12	
3	4	12	56			7	568	12	
12			9	123	9	5	13	467	
	123	5				13	9	467	
	13	9				8	2	467	

- Yellow is not on the box 9 arrow, so this must be 2
- 5 is on the row 9 arrow
- By available options, R9C4 is from 45 and R9C5 is from 13

8	2					3	3	3	9
1	5		9	9		3	2	47	8
9 479	9 79	3	12	8	12	6	47	5	
5		12	12		4	9	568	3	
5		678	3	12		4	568	12	
3	4	12	56			7	568	12	
2			9	13	9	5	13		
	13	5				13	9		
	13	9	5	45	13	567	8	2	

- Gives 13 pair in column 5, making R5C5 a 2
- 3 in R9C5 does not work, as isn't 3 and 2 summing to 5, or 3 and 5 summing to 8. Hence this is 1

8	2					1	3	9
1	5		9	9	3	2	47	8
9	479	9	79	3	2	8	1	6
5		2	1		4	9	568	3
5		678	3	2		4	568	1
3	4	1	56			7	568	2
2	8	678	8	4678	9	3	9	5
467	1	5	8		2	3	9	467
467	3	9	5	45	1	56	8	2

- R5C3 arrow now forced to be 3 and 5 summing to 8
- Resolves the row 9 arrow

8	2	6	467	67	4567	67	1	3	9
1	5	6	467	9	467	3	2	47	8
9	479	9	79	3	2	8	1	6	47
5	67	2	1	67	4	9	8	3	
679	679	8	3	2	67	4	5	1	
3	4	1	5	9	8	7	6	2	
2	8	467	67	3	9	5	1	467	
467	1	5	8	67	2	3	9	467	
67	3	9	4	1	5	8	2	67	

- Sudoku to finish

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