

Step 0: Start

Initial puzzle & candidates.

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

Step 1: Naked Single

R2C8 = 2 (naked single).

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

Step 2: Naked Single

R2C1 = 3 (naked single).

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

Step 3: Naked Single

R3C6 = 1 (naked single).

2 5	1 5	8	6	4	<small>7</small>	1 5 7 9	5 9	3
3	1 6	1 6	8	9	5	1 7	2	4
4	7	5 9	2	3	1	5 8 9	5 8 9	6
7	2	1 4 5	3	1	8	4 5 6 9	5 6 9	<small>9</small>
8	9	3	<small>7</small>	6	4	2 5	5	1
6	1	1 4	<small>9</small>	5	2 9	2 3 4 8 9	3 8 9	7
5	4	5 6	1	8	3	2 6 9	7	2 9
9	3 6 8	7	4	2	2 6	2 3 6 8	1	5
1	3 6 8	2	5	<small>7</small>	<small>7</small> 6 9	3 6 8 9	4	<small>8 9</small>

Step 4: Naked Single

R1C6 = 7 (naked single).

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

Step 5: Naked Single

R4C5 = 1 (naked single).

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

Step 6: Naked Single

R4C9 = 9 (naked single).

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

Step 7: Naked Single

R5C4 = 7 (naked single).

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

Step 8: Naked Single

R5C8 = 5 (naked single).

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

Step 9: Naked Single

R1C8 = 9 (naked single).

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

Step 10: Naked Single

R3C8 = 8 (naked single).

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

Step 11: Naked Single

R3C7 = 5 (naked single).

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

Step 12: Naked Single

R1C7 = 1 (naked single).

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

Step 13: Naked Single

R1C2 = 5 (naked single).

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

Step 14: Naked Single

R1C1 = 2 (naked single).

2	5	8	6	4	7	1	9	3
3	¹	¹	8	9	5	₇	2	4
4	7		2	3	1	5	8	6
7	2	_{4 5}	3	1	8	_{4 6}	₆	9
8	9	3	7	6	4	₂	5	1
6	¹	¹		5	₂	_{2 3}	₃	7
	4	_{5 6}	1	8	3	₂	7	₂
9	₃	7	4	₂	₂	_{2 3}	1	5
1	₃	2	5		₆	₃	4	

Step 15: Naked Single

R2C7 = 7 (naked single).

2	5	8	6	4	7	1	9	3
3	<small>1</small>	<small>1</small>	8	9	5	7	2	4
4	7		2	3	1	5	8	6
7	2	<small>4 5</small>	3	1	8	<small>4 6</small>	<small>6</small>	9
8	9	3	7	6	4	<small>2</small>	5	1
6	<small>1</small>	<small>1</small>		5	<small>2</small>	<small>2 3</small>	<small>3</small>	7
	4	<small>5 6</small>	1	8	3	<small>2</small>	7	<small>2</small>
9	<small>3</small>	7	4	<small>2</small>	<small>2</small>	<small>2 3</small>	1	5
1	<small>3</small>	2	5			<small>3</small>	4	

Step 16: Naked Single

R3C3 = 9 (naked single).

2	5	8	6	4	7	1	9	3
3	¹	¹	8	9	5	7	2	4
4	7	9	2	3	1	5	8	6
7	2	^{4 5}	3	1	8	^{4 6}	⁶	9
8	9	3	7	6	4	²	5	1
6	¹	¹		5	²	^{2 3}	³	7
	4	^{5 6}	1	8	3	²	7	²
9	³	7	4	²	²	^{2 3}	1	5
1	³	2	5			³	4	

Step 17: Naked Single

R4C8 = 6 (naked single).

2	5	8	6	4	7	1	9	3
3	¹	¹	8	9	5	7	2	4
4	7	9	2	3	1	5	8	6
7	2	^{4 5}	3	1	8	⁴	6	9
8	9	3	7	6	4	²	5	1
6	¹	¹		5	²	^{2 3}	³	7
		⁴	⁹		⁹	⁴		
⁵	4	^{5 6}	1	8	3	²	7	²
9	³	7	4	²	²	^{2 3}	1	5
	⁶				⁶	⁶	1	
1	⁸	2	5	⁷	⁶	³	4	⁸
					⁹	^{8 9}		

Step 18: Naked Single

R4C7 = 4 (naked single).

2	5	8	6	4	7	1	9	3
3	¹	¹	8	9	5	7	2	4
4	7	9	2	3	1	5	8	6
7	2	⁵	3	1	8	4	6	9
8	9	3	7	6	4	²	5	1
6	¹	¹		5	²	^{2 3}	³	7
		⁴	⁹		⁹	⁸		
⁵	4	^{5 6}	1	8	3	²	7	²
9	³	7	4	²	²	^{2 3}	1	5
	⁶				⁶	⁶		
1	⁸	2	5			⁸	4	
			⁷		⁶	⁶		⁸
					⁹	^{8 9}		

Step 19: Naked Single

R4C3 = 5 (naked single).

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

Step 20: Naked Single

R5C7 = 2 (naked single).

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

Step 21: Naked Single

R6C2 = 1 (naked single).

2	5	8	6	4	7	1	9	3
3	<small>6</small>	<small>1</small> <small>6</small>	8	9	5	7	2	4
4	7	9	2	3	1	5	8	6
7	2	5	3	1	8	4	6	9
8	9	3	7	6	4	2	5	1
6	1	<small>4</small>	<small>9</small>	5	<small>2</small> <small>9</small>	<small>3</small> <small>8</small>	<small>3</small>	7
<small>5</small>	4	<small>6</small>	1	8	3	<small>6</small> <small>9</small>	7	<small>2</small>
9	<small>3</small> <small>6</small> <small>8</small>	7	4	<small>2</small>	<small>2</small> <small>6</small>	<small>3</small> <small>6</small> <small>8</small>	1	5
1	<small>3</small> <small>6</small> <small>8</small>	2	5	<small>7</small>	<small>6</small> <small>9</small>	<small>3</small> <small>6</small> <small>8</small> <small>9</small>	4	<small>8</small>

Step 22: Naked Single

R2C2 = 6 (naked single).

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

Step 23: Naked Single

R2C3 = 1 (naked single).

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

Step 24: Naked Single

R6C3 = 4 (naked single).

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

Step 25: Naked Single

R6C4 = 9 (naked single).

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

Step 26: Naked Single

R6C6 = 2 (naked single).

2	5	8	6	4	7	1	9	3
3	6	1	8	9	5	7	2	4
4	7	9	2	3	1	5	8	6
7	2	5	3	1	8	4	6	9
8	9	3	7	6	4	2	5	1
6	1	4	9	5	2	<small>3</small>	<small>3</small>	7
<small>5</small>	4	<small>6</small>	1	8	3	<small>6</small> <small>9</small>	7	<small>2</small>
9	<small>3</small> <small>8</small>	7	4	<small>2</small>	<small>6</small>	<small>3</small> <small>6</small> <small>8</small>	1	5
1	<small>3</small> <small>8</small>	2	5	<small>7</small>	<small>6</small> <small>9</small>	<small>3</small> <small>6</small> <small>8</small> <small>9</small>	4	<small>8</small>

Step 27: Naked Single

R6C8 = 3 (naked single).

2	5	8	6	4	7	1	9	3
3	6	1	8	9	5	7	2	4
4	7	9	2	3	1	5	8	6
7	2	5	3	1	8	4	6	9
8	9	3	7	6	4	2	5	1
6	1	4	9	5	2	<small>8</small>	3	7
<small>5</small>	4	<small>6</small>	1	8	3	<small>6 9</small>	7	<small>2</small>
9	<small>3 8</small>	7	4	<small>2</small>	<small>6</small>	<small>3 6 8</small>	1	5
1	<small>3 8</small>	2	5	<small>7</small>	<small>6 9</small>	<small>3 6 8 9</small>	4	<small>8</small>

Step 28: Naked Single

R6C7 = 8 (naked single).

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

Step 29: Naked Single

R7C1 = 5 (naked single).

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

Step 30: Naked Single

R7C3 = 6 (naked single).

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

Step 31: Naked Single

R7C7 = 9 (naked single).

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

Step 32: Naked Single

R7C9 = 2 (naked single).

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

Step 33: Naked Single

R8C5 = 2 (naked single).

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

Step 34: Naked Single

R8C6 = 6 (naked single).

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

Step 35: Naked Single

R8C7 = 3 (naked single).

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

Step 36: Naked Single

R8C2 = 8 (naked single).

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

Step 37: Naked Single

R9C2 = 3 (naked single).

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

Step 38: Naked Single

R9C5 = 7 (naked single).

2	5	8	6	4	7	1	9	3
3	6	1	8	9	5	7	2	4
4	7	9	2	3	1	5	8	6
7	2	5	3	1	8	4	6	9
8	9	3	7	6	4	2	5	1
6	1	4	9	5	2	8	3	7
5	4	6	1	8	3	9	7	2
9	8	7	4	2	6	3	1	5
1	3	2	5	7	<small>9</small>	<small>6</small>	4	<small>8</small>

Step 39: Naked Single

R9C6 = 9 (naked single).

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

Step 40: Naked Single

R9C7 = 6 (naked single).

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

8

Step 41: Naked Single

R9C9 = 8 (naked single).

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