

## Step 0: Start

Initial puzzle & candidates.

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

## Step 1: Hidden Single

R3C1 = 1 (hidden single in its unit).

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

## Step 2: Hidden Single

R9C7 = 3 (hidden single in its unit).

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

### Step 3: Hidden Single

R7C3 = 5 (hidden single in its unit).

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

## Step 4: Hidden Single

R6C3 = 8 (hidden single in its unit).

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

## Step 5: Naked Single

R6C7 = 6 (naked single).

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

## Step 6: Naked Single

R3C7 = 8 (naked single).

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

## Step 7: Hidden Single

R2C8 = 4 (hidden single in its unit).

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



## Step 8: Hidden Single

R1C7 = 9 (hidden single in its unit).

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

## Step 9: X-Wing

X-Wing on digit 6 (rows 4, 7 vs cols 1, 2) → eliminate 6 from: R1C2:  $-\{6\}$ ,  
R2C1:  $-\{6\}$ , R2C2:  $-\{6\}$ .

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

## Step 10: Locked Candidates (Pointing)

In box 3, digit 3 sits only in column 9 → remove 3 from column 9 outside the box.

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

## Step 11: Locked Candidates (Pointing)

In box 3, digit 5 sits only in column 9 → remove 5 from column 9 outside the box.

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

## Step 12: Locked Candidates (Pointing)

In box 6, digit 1 sits only in column 8 → remove 1 from column 8 outside the box.

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

## Step 13: Locked Candidates (Pointing)

In box 9, digit 5 sits only in row 8 → remove 5 from row 8 outside the box.

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

## Step 14: Locked Candidates (Claiming)

In column 3, all candidates 4 lie in one box → remove 4 from the rest of that box.

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

## Step 15: Locked Candidates (Claiming)

In column 3, all candidates 7 lie in one box → remove 7 from the rest of that box.

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



## Step 16: Locked Candidates (Claiming)

In column 4, all candidates 2 lie in one box → remove 2 from the rest of that box.

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

## Step 17: Naked Pair

Naked Pair [1, 3] in Unit at cells [R6C5, R6C8] → eliminate [1, 3] from: R6C2:

-{3}.

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

## Step 18: Naked Pair

Naked Pair [7, 9] in Unit at cells [R8C1, R9C1] → eliminate [7, 9] from: R2C1:

-{9}, R4C1: -{7}, R5C1: -{7}, R7C1: -{7,9}.

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

## Step 19: Hidden Single

R2C2 = 9 (hidden single in its unit).

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

## Step 20: Locked Candidates (Pointing)

In box 4, digit 7 sits only in column 2 → remove 7 from column 2 outside the box.

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

## Step 21: Naked Pair

Naked Pair [1, 8] in Unit at cells [R8C2, R9C2] → eliminate [1, 8] from: R7C2:

-{1,8}.

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

## Step 22: Hidden Pair

Hidden Pair [1, 8] in Unit at cells [R5C6, R5C8] → strip other candidates:

R5C6:  $-\{3,4,5\}$ , R5C8:  $-\{3,5\}$ .

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

## Step 23: Hidden Single

R1C6 = 4 (hidden single in its unit).

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



## Step 24: Naked Single

R1C3 = 6 (naked single).

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

## Step 25: Naked Single

R2C3 = 7 (naked single).

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

## Step 26: Naked Single

R3C3 = 4 (naked single).

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

## Step 27: Naked Single

R3C4 = 7 (naked single).

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

## Step 28: Naked Single

R3C5 = 3 (naked single).

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

## Step 29: Naked Single

R3C9 = 6 (naked single).

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

## Step 30: Naked Single

R6C5 = 1 (naked single).

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

## Step 31: Naked Single

R5C6 = 8 (naked single).

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



## Step 32: Naked Single

R5C8 = 1 (naked single).

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

## Step 33: Naked Single

R6C8 = 3 (naked single).

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

## Step 34: Hidden Single

R2C6 = 6 (hidden single in its unit).

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

## Step 35: Hidden Single

R4C6 = 3 (hidden single in its unit).

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

## Step 36: Hidden Single

R9C6 = 5 (hidden single in its unit).

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

## Step 37: Naked Single

R9C4 = 9 (naked single).

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

## Step 38: Naked Single

R9C1 = 7 (naked single).

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

## Step 39: Naked Single

R8C1 = 9 (naked single).

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



## Step 40: Naked Single

R9C5 = 8 (naked single).

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

## Step 41: Naked Single

R9C2 = 1 (naked single).

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

## Step 42: Naked Single

R8C2 = 8 (naked single).

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

## Step 43: Naked Single

R8C8 = 5 (naked single).

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

## Step 44: Naked Single

R4C8 = 8 (naked single).

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

## Step 45: Naked Single

R4C9 = 7 (naked single).

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

## Step 46: Naked Single

R5C7 = 5 (naked single).

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

## Step 47: Naked Single

R5C4 = 4 (naked single).

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



## Step 48: Naked Single

R5C1 = 3 (naked single).

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

## Step 49: Naked Single

R2C1 = 2 (naked single).

<b>8</b>	<sup>3</sup>	<b>6</b>	<b>1</b>	<sup>2</sup> <sub>5</sub>	<b>4</b>	<b>9</b>	<b>7</b>	<sup>3</sup> <sub>5</sub>
<b>2</b>	<b>9</b>	<b>7</b>	<b>8</b>	<sub>5</sub>	<b>6</b>	<b>1</b>	<b>4</b>	<sup>3</sup> <sub>5</sub>
<b>1</b>	<b>5</b>	<b>4</b>	<b>7</b>	<b>3</b>	<b>9</b>	<b>8</b>	<b>2</b>	<b>6</b>
<sub>6</sub>	<sup>2</sup> <sub>6</sub>	<b>1</b>	<sup>2</sup> <sub>5</sub>	<sub>5</sub> <sub>9</sub>	<b>3</b>	<b>4</b>	<b>8</b>	<b>7</b>
<b>3</b>	<sub>7</sub>	<b>9</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>2</b>
<b>5</b>	<sup>2</sup> <sub>4</sub>	<b>8</b>	<sub>2</sub>	<b>1</b>	<b>7</b>	<b>6</b>	<b>3</b>	<b>9</b>
<sub>4</sub> <sub>6</sub>	<sub>4</sub> <sub>6</sub>	<b>5</b>	<b>3</b>	<sub>7</sub>	<sup>2</sup> <sub>1 2</sub>	<sub>2</sub> <sub>7</sub>	<sub>9</sub> <sub>8</sub>	<sub>1</sub>
<b>9</b>	<b>8</b>	<b>3</b>	<b>6</b>	<b>4</b>	<sub>1 2</sub> <sub>7</sub>	<sub>2</sub> <sub>7</sub>	<b>5</b>	<sub>1</sub>
<b>7</b>	<b>1</b>	<b>2</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>3</b>	<b>6</b>	<b>4</b>

## Step 50: Naked Single

R1C2 = 3 (naked single).

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

## Step 51: Naked Single

R1C9 = 5 (naked single).

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

## Step 52: Naked Single

R1C5 = 2 (naked single).

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

## Step 53: Naked Single

R2C5 = 5 (naked single).

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

## Step 54: Naked Single

R2C9 = 3 (naked single).

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

## Step 55: Naked Single

R4C1 = 6 (naked single).

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



## Step 56: Naked Single

R4C2 = 2 (naked single).

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

## Step 57: Naked Single

R4C4 = 5 (naked single).

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

## Step 58: Naked Single

R4C5 = 9 (naked single).

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

## Step 59: Naked Single

R5C2 = 7 (naked single).

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

## Step 60: Naked Single

R6C2 = 4 (naked single).

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

## Step 61: Naked Single

R6C4 = 2 (naked single).

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

## Step 62: Naked Single

R7C1 = 4 (naked single).

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

## Step 63: Naked Single

R7C2 = 6 (naked single).

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



## Step 64: Naked Single

R7C5 = 7 (naked single).

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

## Step 65: Naked Single

R7C7 = 2 (naked single).

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

## Step 66: Naked Single

R7C6 = 1 (naked single).

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

## Step 67: Naked Single

R7C8 = 9 (naked single).

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

## Step 68: Naked Single

R7C9 = 8 (naked single).

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

## Step 69: Naked Single

R8C6 = 2 (naked single).

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

## Step 70: Naked Single

R8C7 = 7 (naked single).

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

## Step 71: Naked Single

R8C9 = 1 (naked single).

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