

# Futoshiki

This puzzle is very popular with the newspapers, perhaps because it is easy to make and easy to solve! Rarely do you see puzzles larger than  $5 \times 5$  as these get rather tedious, but as they are more of a challenge. I have collected some at  $6 \times 6$  and  $7 \times 7$ .

The common  $5 \times 5$  puzzle has a square array of 25 small squares, and the aim is to fill these small squares with the digits 1 to 5, in what is known as a latin square. The requirement is that each row and each column must contain each digit once only. These digits are more than labels as they must be arranged so as to obey the arithmetic signs,  $>$  meaning greater than the number in the square to the right,  $<$  meaning greater than the neighbour to the left. For neighbours vertically the signs  $\vee$  and  $\wedge$  follow the same logic

Sometimes for variety in the  $5 \times 5$  puzzles one or two of the digits are given, but these 'givens' become essential for the sanity of the puzzler as the puzzle size gets larger.

# Futoshiki 5 × 5

□	□	>	□	>	□	>	□
					∨		
□	□		□		□		□
□	□		□		□		□
□	<	□		□	<	□	
		∧		∨			
□	<	□		□		□	

1

□	□	>	□		□		□
			∧		∧		∧
□	□		□		□	<	□
			∧		∨		∧
□	□		□		□		□
			∧				
□	□		□		□		□
□	□		□	>	□		□

2

□	>	□		□		□	
□	□		□		□		□
		∧			∧		
□	□		□	<	□		□
			∨		∨		
□	>	□	<	□		□	
		∧					
□	□		□	>	□		□

3

□	□	<	□		□		□
			∧				∧
□	□	<	□		□		□
□	□		□		□		□
		∨			∨		
□	□		□		□	<	□
							∧
□	>	□		□		□	

4

□	□		□	<	□		□
□	>	□		□	<	□	>
							∧
□	□	<	□	<	□		□
				∧			
□	>	□		□		□	
		∧					
□	□		□		□		□

5

□	□		□		□	>	□
		∨					
□	□		□		□		□
□	□		□	>	□	>	□
□	□		□		□		□
				∧		∧	∨
□	>	□	>	□		□	

6

**Futoshiki** 5 × 5

□	□	□	□	□		
□	□	<	□	<	□	□
□	□	□	<	□	>	□
□	□	>	□	□	>	□
□	<b>3</b>	<	□	<	□	□

7

□	□	□	>	□	<b>3</b>
		^			
□	<	□	□	□	□
		v			
□	□	<	□	□	□
		^		^	^
□	□	□	□	□	□
				^	
□	□	□	□	□	□

8

□	<	□	>	□	□	>	□
				^			
□	□	□	□	□	□	□	□
				v			
□	□	□	<	□	□	□	□
				^			
□	□	□	□	□	<b>3</b>	□	□
				^			
□	□	□	□	□	>	□	□

9

□	□	>	□	□	□	
□	□	□	<	□	>	□
			^			
□	□	□	□	□	>	□
				v		
<b>1</b>	□	□	□	□	>	□
				^		
□	□	□	<	□	□	□

10

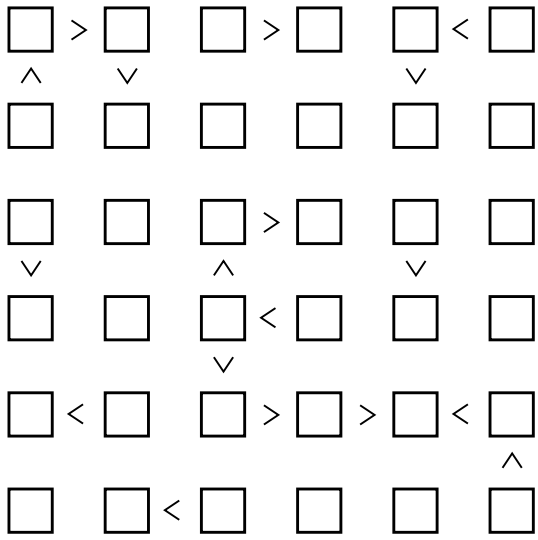
□	□	□	□	□		
	^		^			
□	<	□	□	□	<	□
□	□	□	□	□	<	□
				v		
□	□	□	>	□	<b>5</b>	□
				v		
□	>	□	□	□	□	□

11

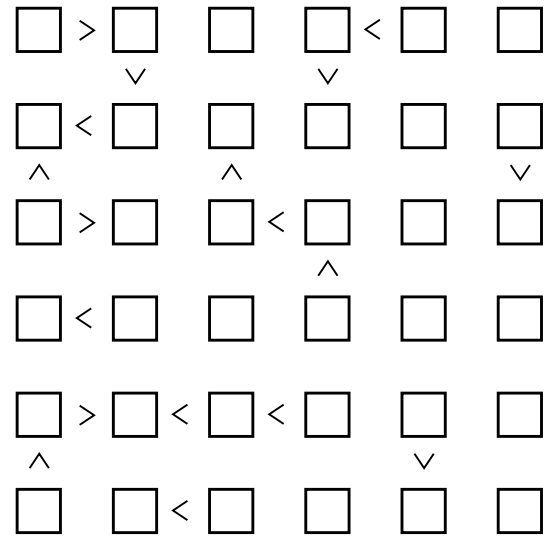
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		^		^	
□	□	<	□	□	□
				v	v
□	>	□	□	□	□
				v	v
□	□	□	□	□	□
□	□	□	□	□	□

12

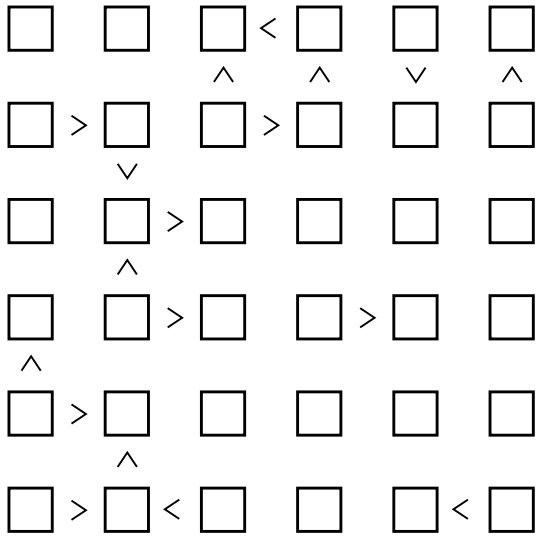
**Futoshiki** 6 × 6



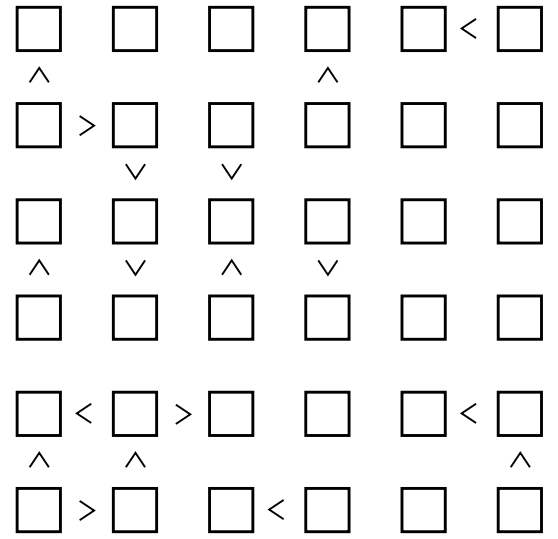
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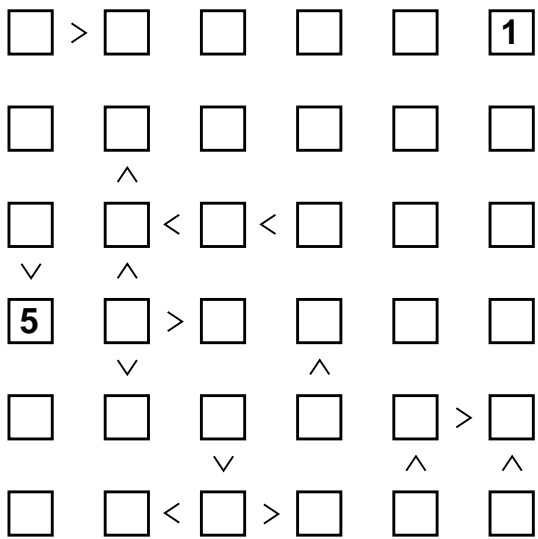
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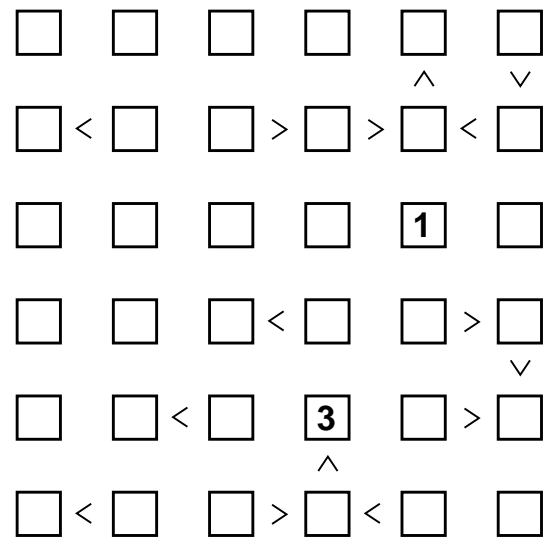
3



4



5



6

**Futoshiki** 6 × 6

□	□	□	>	□	□
^	^			v	^
□	□	□	<	□	<
	v				
□	□	<	□	□	<
			v		
□	□	□	<	□	□
□	<b>4</b>	□	□	<b>3</b>	□
□	□	>	□	□	□

7

<b>4</b>	□	□	□	>	□	<b>3</b>	
v					^		
<b>2</b>	□	□	□	□	□	□	
			v				
□	<	□	<	□	□	□	
□	□	□	□	□	>	□	
□	□	□	□	□	□	□	
		^	v	v			
<b>1</b>	□	□	□	>	□	>	□

8

□	□	□	<b>1</b>	□	□		
				^	^		
□	□	>	□	□	>	□	
□	□	□	>	□	□	□	
□	>	□	<b>6</b>	□	□	□	
^							
□	>	□	<	□	□	<b>2</b>	□
^							
□	□	<	□	□	<	□	<b>1</b>

9

□	>	□	□	□	□	□
				v		
□	□	□	<	□	□	□
^						
□	<	□	□	□	<b>6</b>	□
					v	
<b>2</b>	□	>	<b>3</b>	□	□	□
			^			
□	□	□	□	□	□	□
				v		^
□	□	<	□	<	□	<b>4</b>

10

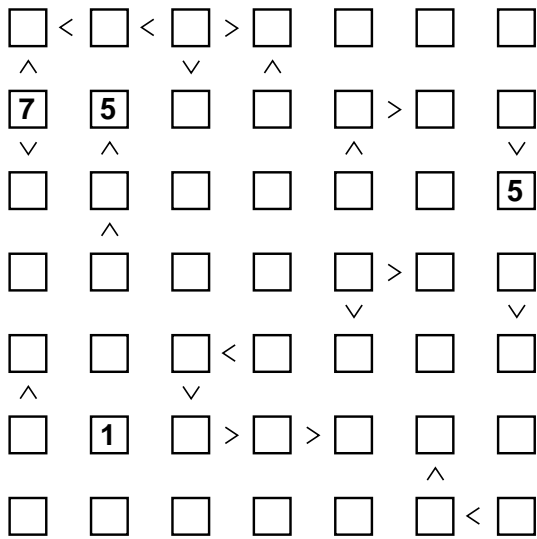
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				^				
□	□	□	<	□	□	□	□	
v						^		
□	>	□	□	□	□	<b>4</b>	□	
□	□	<b>5</b>	□	□	□	□	□	
		^						
□	□	<	□	□	□	<b>3</b>	□	
^				^				
□	□	□	□	<b>4</b>	□	□	□	

11

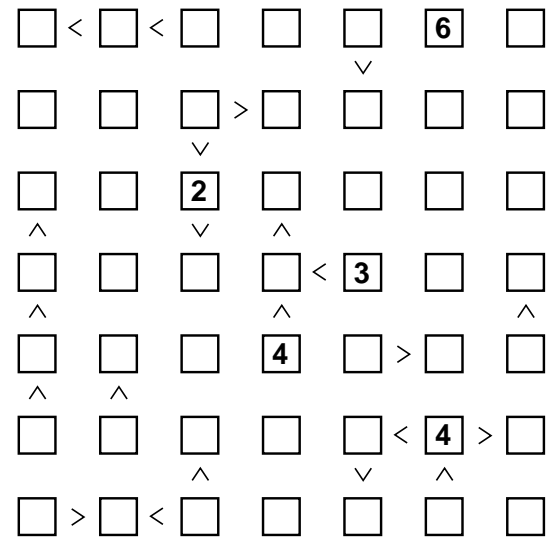
□	>	□	<b>6</b>	□	<	□	<	□
					v			
□	□	□	□	□	□	□	□	
		v						
□	>	□	□	□	□	□	□	
^							v	
□	□	□	<b>1</b>	□	<b>2</b>	□	□	
		^						
□	<	□	□	>	□	□	□	
□	>	□	□	□	□	□	<b>4</b>	

12

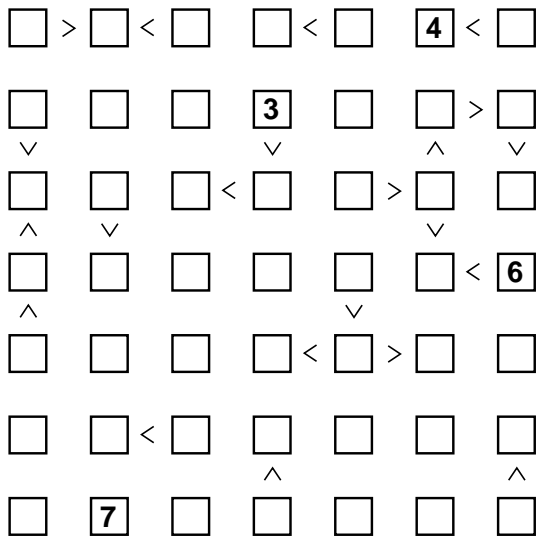
# Futoshiki 7×7



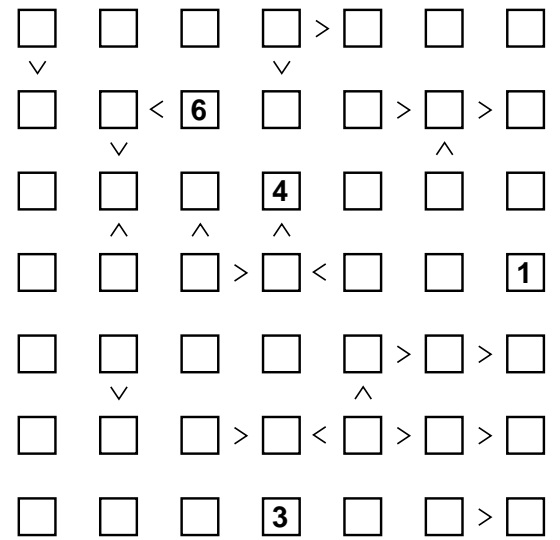
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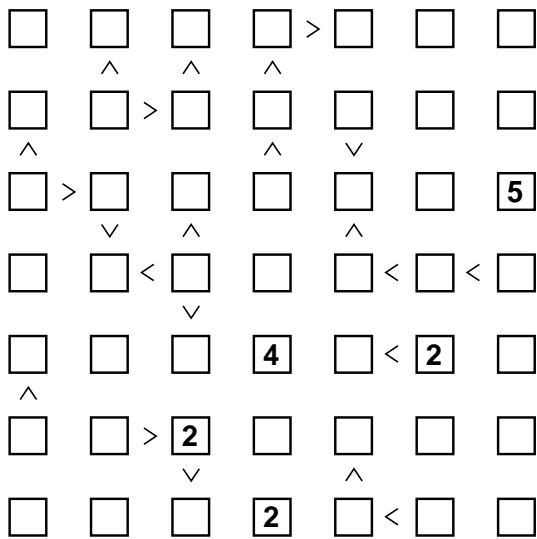
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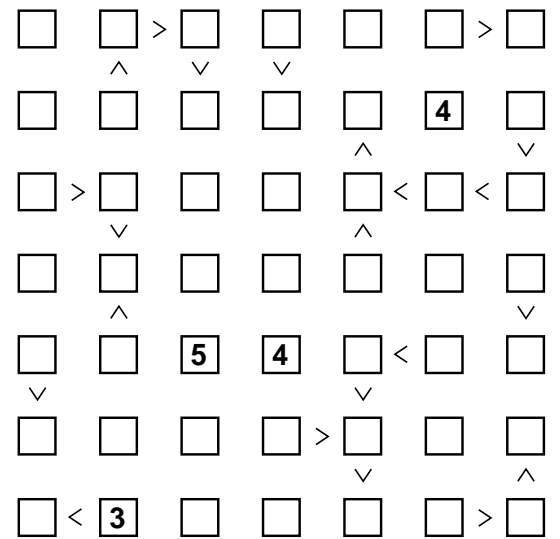
3



4



5



6

**Futoshiki** 7×7

□	□	>	□	<b>5</b>	□	□	>	□	
□	□	□	□	□	>	□	□		
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<b>3</b>	□	□	<	□	□	□	□	□	
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**7**

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□	<	<b>2</b>	□	□	□	□	□	□	
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□	>	□	□	□	□	>	<b>4</b>	□	
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**8**

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□	□	<	<b>5</b>	□	□	>	□	>	□
□	□	□	□	□	□	□	□		
□	<b>7</b>	□	<	□	>	□	<b>5</b>	<b>4</b>	
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**9**

□	□	□	<	□	<	□	<b>4</b>	□	
□	□	>	□	□	<	□	□	<	□
□	□	<b>2</b>	<b>6</b>	□	>	□	□		
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□	□	□	□	□	>	□	<b>4</b>		
□	□	□	□	□	□	□	□	□	
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**10**

□	□	□	□	<	□	□	□		
□	□	<	□	<b>3</b>	□	□	<	□	
□	□	>	□	□	□	<	□	<	□
<b>1</b>	□	□	>	□	□	□	□	□	
□	□	□	>	□	□	>	□	>	□
□	□	□	<	<b>5</b>	>	□	>	□	□
<b>4</b>	□	>	□	□	□	□	□	□	

**11**

□	<b>6</b>	□	>	□	>	□	>	□	>	□
□	□	□	□	□	□	□	>	□		
□	□	>	□	□	>	□	□	□		
□	<b>2</b>	<	□	□	<	□	<	□	<	□
□	□	□	>	□	□	□	□	□		
□	□	□	<	□	<	<b>3</b>	□	□		
□	>	□	□	□	□	>	□	<b>5</b>		

**12**

# Futoshiki 5 × 5

# Solutions

4	5	>	3	>	2	>	1
5	3	4	1	2			
3	1	2	4	5			
1	<	2	5	3	<	4	
2	<	4	1	5	3		

1

4	5	>	1	2	3		
5	1	2	3	<	4		
2	4	3	1	5			
3	2	4	5	1			
1	3	5	>	4	2		

2

4	>	3	1	2	5		
1	4	5	3	2			
2	1	4	<	5	3		
5	>	2	<	3	4	1	
3	5	2	>	1	4		

3

4	2	<	3	5	1		
5	3	<	4	1	2		
2	5	1	3	4			
1	4	5	2	<	3		
3	>	1	2	4	5		

4

3	5	1	<	2	4		
5	>	4	2	<	3	>	1
1	2	<	3	<	4	5	
2	>	1	4	5	3		
4	3	5	1	2			

5

3	2	1	5	>	4		
2	1	5	4	3			
1	5	>	4	>	3	>	2
4	3	2	1	5			
5	>	4	>	3	2	1	

6

3	2	5	1	4			
4	1	<	2	<	3	5	
2	5	1	<	4	>	3	
5	4	>	3	2	>	1	
1	3	<	4	<	5	2	

7

5	4	2	>	1	3		
4	<	5	3	2	1		
3	1	<	5	4	2		
2	3	1	5	4			
1	2	4	3	5			

8

3	<	5	>	4	2	>	1
2	1	3	4	5			
5	4	1	<	3	2		
4	2	5	1	3			
1	3	2	5	>	4		

9

4	5	>	4	1	3		
5	2	1	<	3	>	2	
3	4	5	2	>	1		
1	3	2	5	>	4		
2	1	3	<	4	5		

10

1	4	3	5	2			
2	<	5	1	3	<	4	
5	1	4	2	<	3		
4	3	2	>	1	5		
3	>	2	5	4	1		

11

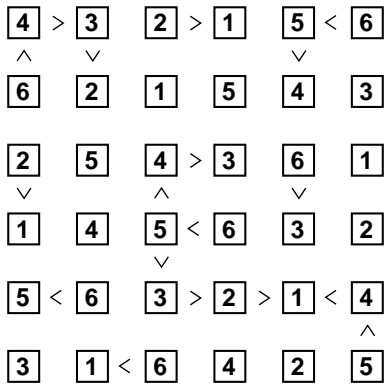
1	5	2	<	4	3		
2	1	<	3	5	4		
5	>	4	1	3	2		
4	3	5	2	1			
3	2	4	1	5			

12

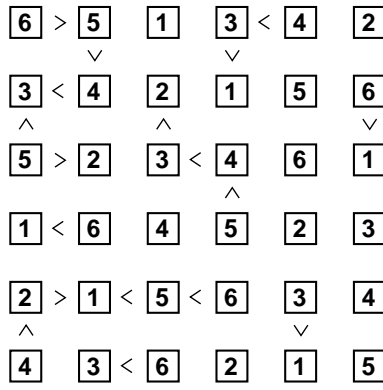


# Futoshiki 6 × 6

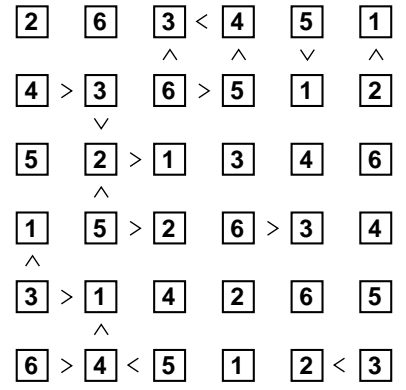
# Solutions



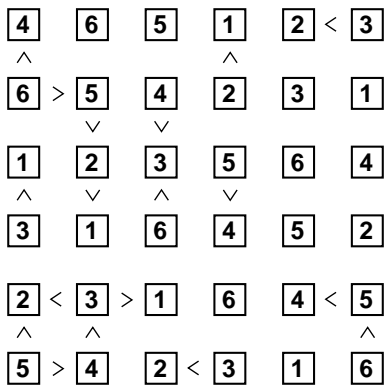
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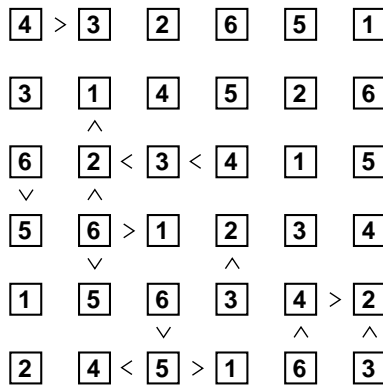
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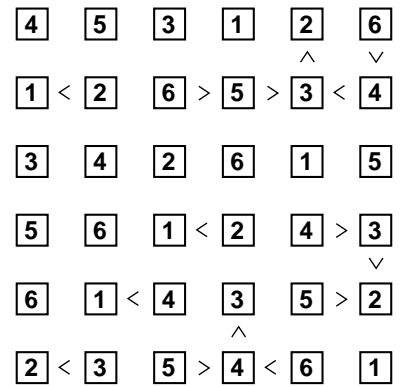
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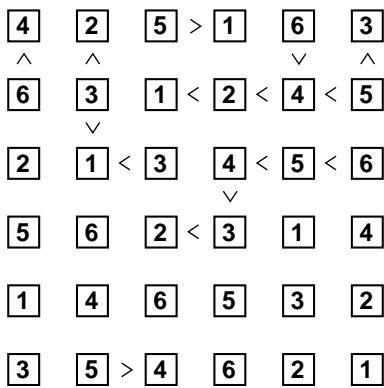
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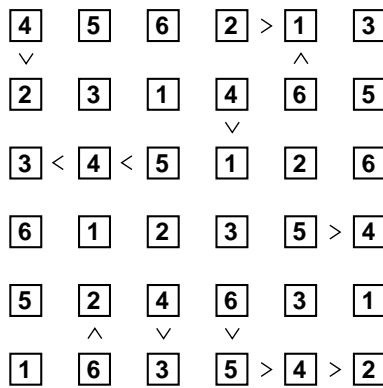
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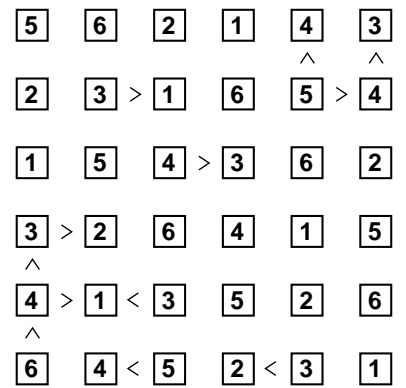
6



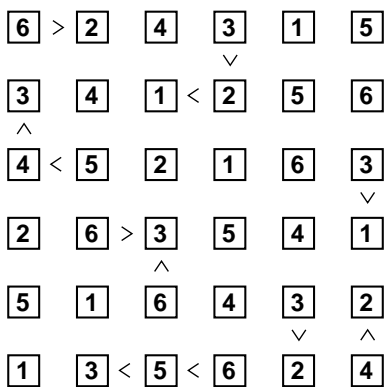
7



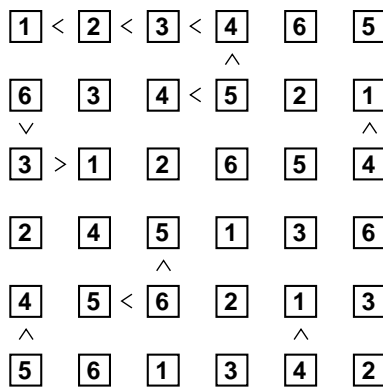
8



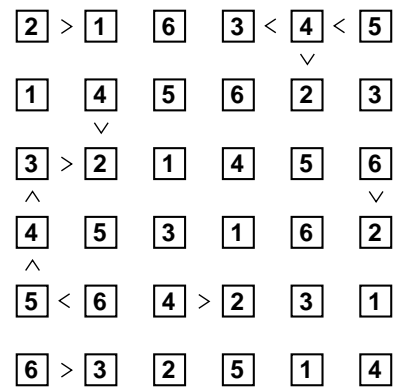
9



10



11



12

# Futoshiki 7 × 7

# Solutions

3	<	4	<	7	>	2	5	6	1
7	5	4	3	2	>	1	6		
2	6	3	1	4	7	5			
1	7	2	5	6	>	4	3		
4	3	6	<	7	1	5	2		
6	1	5	>	4	>	3	2	7	
5	2	1	6	7	3	<	4		

1

1	<	3	<	4	5	7	6	2	
2	5	7	>	6	4	1	3		
4	7	2	1	6	3	5			
5	4	1	2	<	3	7	6		
6	1	3	4	5	>	2	7		
7	6	5	3	2	<	4	>	1	
3	>	2	<	6	7	1	5	4	

2

2	>	1	<	3	5	<	6	4	<	7
7	6	2	3	1	5	>	4			
4	5	1	<	2	7	>	6	3		
5	2	3	7	4	1	<	6			
6	4	6	1	<	3	>	2	5		
6	3	<	5	4	2	7	1			
1	7	4	6	5	3	2				

3

4	5	3	7	>	2	1	6			
1	3	<	6	2	7	>	5	>	4	
2	1	5	4	3	6	7				
3	4	7	>	5	<	6	2	1		
5	7	1	6	4	>	3	>	2		
7	6	2	>	1	<	5	>	4	>	3
6	2	4	3	1	7	>	5			

4

7	4	3	5	>	2	6	1			
1	5	>	4	6	7	3	2			
4	>	2	6	7	3	1	5			
2	1	<	7	3	4	<	5	<	6	
3	6	5	4	1	<	2	7			
6	7	>	2	1	5	4	3			
5	3	1	2	6	<	7	4			

5

6	5	>	4	7	1	3	>	2		
5	6	1	3	2	4	7				
7	>	4	2	1	3	<	5	<	6	
4	1	6	5	7	2	3				
3	2	5	4	6	<	7	1			
2	7	3	6	>	5	1	4			
1	<	3	7	2	4	6	>	5		

6

4	3	>	2	5	1	7	>	6		
5	6	3	4	2	>	1	7			
2	>	1	7	>	3	6	5	4		
6	<	7	1	<	2	5	>	4	>	3
1	<	2	4	7	3	6	5			
3	4	5	<	6	7	2	1			
7	>	5	6	1	4	>	3	>	2	

7

6	>	1	4	7	2	3	5			
5	>	3	7	6	1	2	<	4		
1	<	2	6	5	4	7	3			
4	5	2	1	3	6	<	7			
3	<	7	5	>	4	6	1	2		
7	>	6	3	2	5	>	4	1		
2	4	1	3	7	>	5	<	6		

8

4	2	7	1	5	6	3				
1	5	6	7	3	<	4	2			
5	6	4	>	3	2	1	<	7		
6	3	<	5	4	7	>	2	>	1	
3	4	1	2	6	7	5				
2	7	3	<	6	>	1	5	4		
7	1	<	2	5	4	3	6			

9

2	5	1	<	3	<	6	4	7		
3	6	>	4	5	<	7	1	<	2	
5	7	2	6	4	>	3	1			
7	4	<	6	1	<	2	5	>	3	
6	1	5	7	3	>	2	4			
4	3	7	2	1	6	5				
1	<	2	3	4	<	5	7	6		

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6	1	3	2	<	7	5	4			
5	2	<	4	3	6	1	<	7		
2	7	>	6	1	3	<	4	<	5	
1	3	5	>	4	2	7	6			
3	4	7	>	6	5	>	2	>	1	
7	6	1	<	5	>	4	>	3	2	
4	5	>	2	7	1	6	3			

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2	6	7	>	5	>	4	>	3	>	1
1	5	2	7	6	4	>	3			
5	4	>	3	6	>	1	7	2		
3	2	<	4	1	<	5	<	6	<	7
4	1	5	>	3	7	2	6			
6	7	1	<	2	<	3	5	4		
7	>	3	6	4	2	>	1	5		

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